

Contract No.: EP-W-09-002
WA #: 060-RICO-02MV

Region 2 RAC2 Remedial Action Contract

Health and Safety Plan

Pierson's Creek Site
Remedial Investigation/Feasibility
Study
Newark, New Jersey

January 15, 2016

**CDM
Smith**

**PIERSON'S CREEK SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NEWARK, NEW JERSEY
HEALTH AND SAFETY PLAN**

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The CDM Smith Corporate Health and Safety Manual (January 2012) applicable excerpts are included in Appendix B of this HASP.

Using this Health and Safety Plan

- CDM Smith and this project's Owner require that this scope of work not result in:
 - Injuries to employees of CDM Smith, or other persons.
 - Employee exposures to health or injury hazards
 - Significant increases in contaminant levels in air, soil, water, or sediment near the site.
 - Violations of OSHA, MSHA, EPA, NRC, or State regulations.
- Each of you who read this plan have a responsibility to
 - Understand and follow its requirements.
 - Help other project personnel understand and follow its requirements
 - Let someone know if any team member doesn't understand all of it (for example, those who can't read the language in which the plan is written)
 - Inform other on-site persons (no matter what their affiliation) about conditions that could harm them
 - Inform your project manager, team leader, or health and safety manager about any training, materials, or equipment that would help you work more safely
 - Use the CDM Smith Safe-Think process to prevent injury during this project
- General Rules
 - No person should perform any work that places his or her safety, or that of others, at risk
 - Quickly notify your Site Health and Safety Officer, Project/Site Manager, or Health and Safety Manager about any unsafe act or condition
 - Any person on-site may stop work for unsafe conditions or unsafe actions

Safe - Think Process

Our **Safe - Think process** is a tool that is used in many safety management systems and is conducted by individual employees. The process is simply a mental exercise—involving no forms, plans, complex written procedures or programs—and it is something every employee can and should do.

Stop and think about the task at hand. Some questions to ask include:

- What am I going to do?
- What steps or actions am I going to perform?
- How could I or someone else get hurt?
- Do I have the right equipment?
- What else is going on around me?
- Do I understand how to do this task safely?
- Do I need help?

Here are some questions to ask yourself when assessing everyday work situations.

When working at a desk:

- Are my desk, chair, and workstation set up properly?
- Am I comfortable?
- Should I ask for help to assess my workstation?
- Do I take sufficient breaks or change tasks to allow appropriate rest and recovery periods?

Before carrying and/or lifting something:

- Where am I going to put it down?
- Is the travel path between where I pick it up and put it down clear and trip/slip free?
- How big/heavy is it?
- Is it easy or hard to hold onto?
- Am I wearing the right footwear to safely lift an object?
- Do I need help?
- Are there tools available to help (hand trucks, dollies, etc.)?

If, after asking yourself these questions, you believe you can do the work safely, then proceed and accomplish the task. On the other hand, if you conclude that you are not sure you can do the work safely, don't have the right equipment, or think you need help, then you should stop and take steps to correct the issue. Help is available from your direct manager, H&S coordinator, or H&S manager.

This process empowers you to identify hazards associated with your work and to take actions to make it safe. We should all perform these personal hazard assessments on an ongoing basis, at the beginning of the day, when we change tasks or do something new, or when conditions change.



First Aid/Medical Advisory Services – CDM Smith has partnered with AllOne Health to provide 24/7 first aid and medical advice services to U.S. based employees. This means that employees have a reliable, round-the-clock resource staffed by qualified nurses and doctors who can provide guidance about first aid and medical treatment for non-emergency work related injuries or illnesses.

For medical emergencies, continue to call local emergency services directly via 911! H&S management should be notified as soon as practicable.

If an occupational injury occurs, call the toll-free AllOne Health number, **(1.800.350.4511, and PRESS 1)** and you will be transferred to a medical professional.

Be prepared to provide:

- ***Name/contact information***
- ***Location***
- ***Supervisor/manager information***
- ***Whether you are with CDM Constructors or another CDM Smith unit***
- ***Description of the injury and any relevant existing medical conditions***

The nurse will then recommend:

- **First Aid:** The employee will be provided self-care instructions or first aid treatments to be performed.
- **Non-Emergency Medical Care:** If warranted, the nurse will recommend and identify the nearest qualified clinic where the injured employee should be taken, communicating with and advising clinic staff of the situation.
- **Emergency Care:** *Please note that for medical emergencies, you should continue to call 911 first, notifying AllOne Health and H&S management as soon as it is practical to do so.*

For CCI projects and others with pre-arranged medical services, project-specific procedures may supersede those listed here. CCI personnel may still require Drug and Alcohol Testing.

1. ***Follow AllOne Health instructions (e.g., first aid, go to clinic, etc.).***
2. ***Complete and submit the standard CDM Smith [Injury/Illness Report form](#).***
3. ***After your care, follow-up with AllOne at the 1-800 # to discuss your treatment and any questions you may have.***

Employee well-being continues to be our highest concern. It is our belief that these new services will enhance the quality and timeliness of first aid and medical care for non-emergency work related injuries or illnesses. If you have any questions regarding this program contact your H&S Manager.

General Information			
This task-specific health and safety plan (HASP) provides safety-related information and requirements specific to the task and work location(s) described. General requirements contained in the CDM Smith Health and Safety Program along with those described in this task-specific HASP will be implemented except where noted. Significant changes to this HASP shall be documented by resubmittal of a revised task-specific HASP.			
Project Name:	Pierson's Creek Superfund Site	Client:	EPA Region 2
Project No.:	060-RICO-02MV	Date:	1/15/2016
Performing Organization(s):		CDM Smith	
Planned Duration of Field Activities:		1 Day	
Project Location:	Newark, NJ		
Key Personnel			
Site Manager:	Edward Leonard	Telephone:	(732)590-4695
Project Health and Safety Contact:	Tonya Bennett	Telephone:	(212) 377-4532
Project Field Personnel		Responsibilities	Telephone
Edward Leonard		Site Manager	(732) 590-4695
Joseph Mayo		Task Manager	(212) 377-4517
Joseph Button		Geologist	(212) 377-4389
Project Site Description	This HASP will be used to support the site walk of the Pierson's Creek Superfund Site in Newark, NJ. Although the Site is primarily centered around the Troy Chemical Plant, other properties in the area have contributed to the contamination of Pierson's Creek and an unnamed tributary, both north and south of Troy Chemical. Facility specific descriptions are included on Pages 2 and 3 and facility layout plans are included as Appendix A. Note that facility layout plans could not be obtained for the facilities located at 80 Avenue K and 7 Avenue L.		

Facility Specific Information	
<p>Troy Chemical 1 Avenue L Newark, NJ</p>	<p>The Troy Chemical Site is a 6.11-acre property that has been used for industrial purposes for approximately 150 years. Previous uses include the manufacture of ultramarine, aniline, and coal tar dyes as well as metallic soaps, paint dryers, mercuric oxide, and fungicides all containing lead and mercury. The Troy Plant Site was acquired by the present-day owner and operator, now named the Troy Chemical Corporation, Inc., in 1980. Troy immediately began phasing out the production of mercury compounds in 1980 and ceased all production of mercury compounds by February 1987. Groundwater, surface water, soil, air, and solid material within the concrete ditch/culvert at the Troy Plant Site have been the subject of extensive characterization sampling and chemical analysis performed for Site Investigations, Remedial Investigations, and Remedial Actions under the provisions of the NJDEP Technical Requirements for Site Remediation. VOCs, SVOCs, petroleum hydrocarbons, pesticides, PCBs, and metals were identified in various site media.</p> <p>The majority of this facility is covered by structures, concrete, and asphalt paving. The facility is currently fenced and access is limited by Plant security. A site map is displayed as Figure 1-A. Site Plan layouts for all facilities are included as Appendix A. A central feature of the Troy Plant Site is the concrete ditch/culvert that runs from the northern to the southern property boundaries, a distance of approximately 550 feet. Storm water has traversed the property along the concrete ditch and culvert since the early part of the 20th century. The ditch historically extended to the north on to the former Albert Steel Drum site. The northern section of the concrete ditch was filled during remediation and redevelopment of Albert Steel Drum in 2008 and was sealed with concrete to prevent the in-flow of storm water from the redeveloped property.</p>
<p>Former Engelhard Corporation 429 Delancey Street Newark, NJ</p>	<p>The former Engelhard site is located to the south of the Troy Plant Site and the USF Red Star site. Operations at the former Engelhard facility included refining precious metals and manufacturing of catalysts and other specialty chemicals. Engelhard's operations began in 1953 and ceased in 1987. Seventy-five areas of concern (AOCs) for soil were identified including lead, mercury and other metals, base-neutral organics, total petroleum hydrocarbons, and PCBs. A remedial action report (RAR) was submitted in 1995, which included the removal of approximately 1,600 yards of sediment within Pierson's Creek and the drainage ditch as well as excavation of approximately 2,000 yd³ of on-site soil. NJDEP issued a no further action (NFA) for these AOCs in 1996 and in November 2000 a cap was proposed along with engineering controls for the rest of the site. This has not been implemented. The site is currently vacant. A site map is included as Figure 1-B.</p>
<p>Albert Steel Drum Prentiss Drug and Chemical Company 338 Wilson Avenue Newark, NJ</p>	<p>The Albert Steel Drum and Prentiss Drug and Chemical Company (ASD/PDC) site, located to the north of the Troy Plant Site, has been developed since the late 1800s. Former uses of the site include the manufacture of dyes, pigments, pesticides, drum reconditioning, and as a dump for construction materials and other wastes. A Phase II Remedial Investigation was conducted in 1993 which found elevated concentrations of PAHs, pesticides, PCBs, arsenic, lead, and mercury in on-site soils. Elevated concentrations of arsenic, PAHs, and PCBs were also detected in material from drainage ditches. Hot spot soil contamination was also excavated and disposed of off-site from 1998-1999. Additional soil excavation from the former junkyard and specific areas with VOC and PCB hotspots was performed in 2002. Starting in 2004, surface soil was characterized and excavated where contaminated soil exceeded site-specific cleanup criteria. The material in the drainage ditch was also excavated and disposed of off-site, and the drainage ditch was filled to grade. Finally, the site was capped and engineering controls were implemented. While some heavily contaminated areas of the ASD/PDC were excavated and removed, impacted soil was left in place under the site-wide cap. The property is currently leased by FedEx Freight. A site map is included as Figure 1-C.</p>
<p>Former Red Star 400 Delancey Street Newark, NJ</p>	<p>The USF Red Star site, located to the south of Troy Chemical, is in the NJDEP Site Remediation Program (SRP) due to soil and groundwater contamination associated with 12 underground storage tanks (USTs). The USTs were removed along with approximately 350 yards of soil in 1992, with the exception of one UST which was located in a vault and closed in place. UST contents included diesel, heating oil, motor oil, waste motor oil, and unspecified contents. A free product recovery system</p>
<p>Rokeach Food Corporation and Manischewitz Company 80 Avenue K Newark, NJ</p>	<p>This site is currently operated by Rokeach Food Corporation and The Manischewitz Company, and involves the manufacturing of kosher foods. A remedial investigation was conducted in association with an UST (or possibly multiple USTs) and a NFA status was granted on May 10, 1995. However, light non-aqueous phase liquid (LNAPL) was discovered at the site in 2010 and interim remedial measures were conducted. Additional relevant details regarding remediation of the Rokeach site are not available at this time. A site map is included as Figure 1-E.</p>
<p>Welch, Holme & Clark Globe Metal 7 Avenue L Newark, NJ</p>	<p>Welch Holme and Clark (WH&C) is located to the east of the Troy Plant Site. WH&C sells and distributes vegetable oils. No violations were found for this facility. Globe Metals, a scrap metal processing facility, is also located to the east of the Troy Plant Site, to the south of WH&C. This facility has received numerous violations for not adhering to the NJPDES permit requirements, however, no remedial investigations or remedial actions have been undertaken at the site. A site map is included as Figure 1-F.</p>

CDM Smith Activity Hazard Analysis							
Project Name:	Pierson's Creek Superfund Site			Project No.:	060-RICO-02MV		
Analyzed by:	Tonya Bennett	Date:	01/15/16	Reviewed by:	Shawn Olivera	Date:	01/15/16
Description of Work Activity							
The site-specific HASP will be used to support a site walk guided by a site representative. The reconnaissance will not include any intrusive activities. See Appendix A for additional detail.							
Potential Hazards		Hazard Controls		(Examples provided at this link)			
Motorized Traffic		High Visibility Vest, Hard Hat, Cones (if necessary)					
Active Work Zones		High Visibility Vest, Hard Hat, Safety Glasses, Steel Toe Boots					
Slips and Falls		CDM Smith Safe Think Process					
Cold Stress		Warm Work Clothes Appropriate to Current Weather					
Training Required		Equipment Required					
40 Hour OSHA HAZWOPER		None					
8 Hour OSHA HAZWOPER Refresher							

Emergency Plan and Information			
Basic Approach:	If an emergency happens, the CDM Smith team will rapidly, but without haste, withdraw to a safe location and notify the appropriate emergency agencies listed below.		
Police:	911		
Fire:	911		
CDM Smith H & S Manager	Shawn Oliveira	406 / 293 - 2672	
Poison Control Center	Nationwide	1 800 / 222 - 1222	
State Spill Number:	New Jersey	(877) Warn-DEP	
24-Hr. First Aid/Non-Emergency Medical Services:	1-800-350-4511, Press 1		
	<p>For non-emergency medical services:</p> <p>1. Call AllOne Health at 1.800.350.4511, PRESS 1, and tell them you are reporting an injury for CDM Smith. Supply requested information.</p> <p>2. Follow AllOne Health instructions (e.g., first aid, go to clinic, etc.).</p> <p>3. After care, follow-up with AllOne at the 1-800 #.</p>		
Ambulance:	Ironbound Ambulance Squad, Inc. (973) 589-3795		
Client's Emergency Number:	Pam Tames (212) 637-4255		
Nearest Medical Facility:	University Hospital		
Address:	150 Bergen St, Newark, NJ 07103		
Telephone:	(973) 972-4300		
Driving Directions:	<p>1. Head northeast on Avenue L toward Wilson Avenue</p> <p>2. Turn left at the first cross street onto Wilson Avenue</p> <p>3. Continue on Lafayette Street to Market Street (Route 510) for 1.5 miles</p> <p>4. Continue on Route 510 for 1.1 miles and turn right onto Bergen Street</p> <p>5. The hospital is on the right</p>		
Reviews			
Health and Safety Coordinator	Tonya Bennett	Date:	1/15/2016
Health and Safety Manager:	Shawn Oliveira	Date:	1/15/2016

Health & Safety Plan Signature Form

CDM Smith Health and Safety Plan

All site personnel must sign this form indicating receipt or review of the HASP. Keep this original for the site visit. It becomes part of the permanent project files. Send a copy to the health and safety manager (HSM).

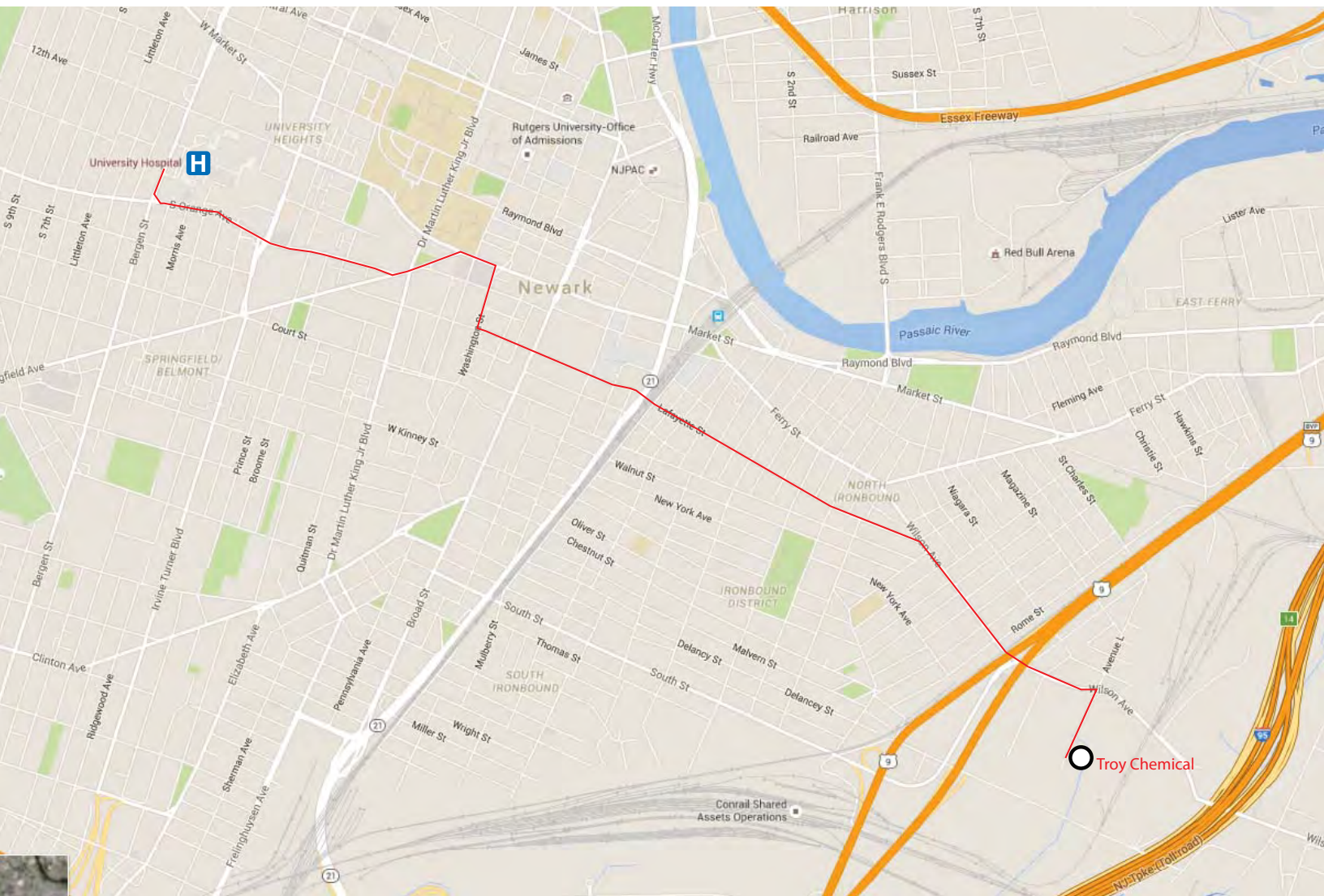
SITE NAME/NUMBER: Pierson's Creek/WA 060

DIVISION/LOCATION: _____

CERTIFICATION:

I understand, and agree to comply with, the provisions of the above referenced HASP for work activities on this project. I agree to report any injuries, illnesses or exposure incidents to the site health and safety coordinator (SHSC). I agree to inform the SHSC about any prescription drugs or over-the-counter medication that may cause impairment that I take within 24 hours of site work.

PRINTED NAME	SIGNATURE	DATE



Source: Google Maps



- University Hospital
- Subject Property



Hospital Route Map
Pierson's Creek
Newark, New Jersey



Figures



Source: Google Maps



Property Boundary



Not to Scale

Figure 1-A
Site Map
Troy Chemical
Pierson's Creek
Newark, New Jersey



Source: Google Maps



 Property Boundary



Figure 1-B
Site Map
429 Delancey Street (Former Englehard)
Pierson's Creek
Newark, New Jersey



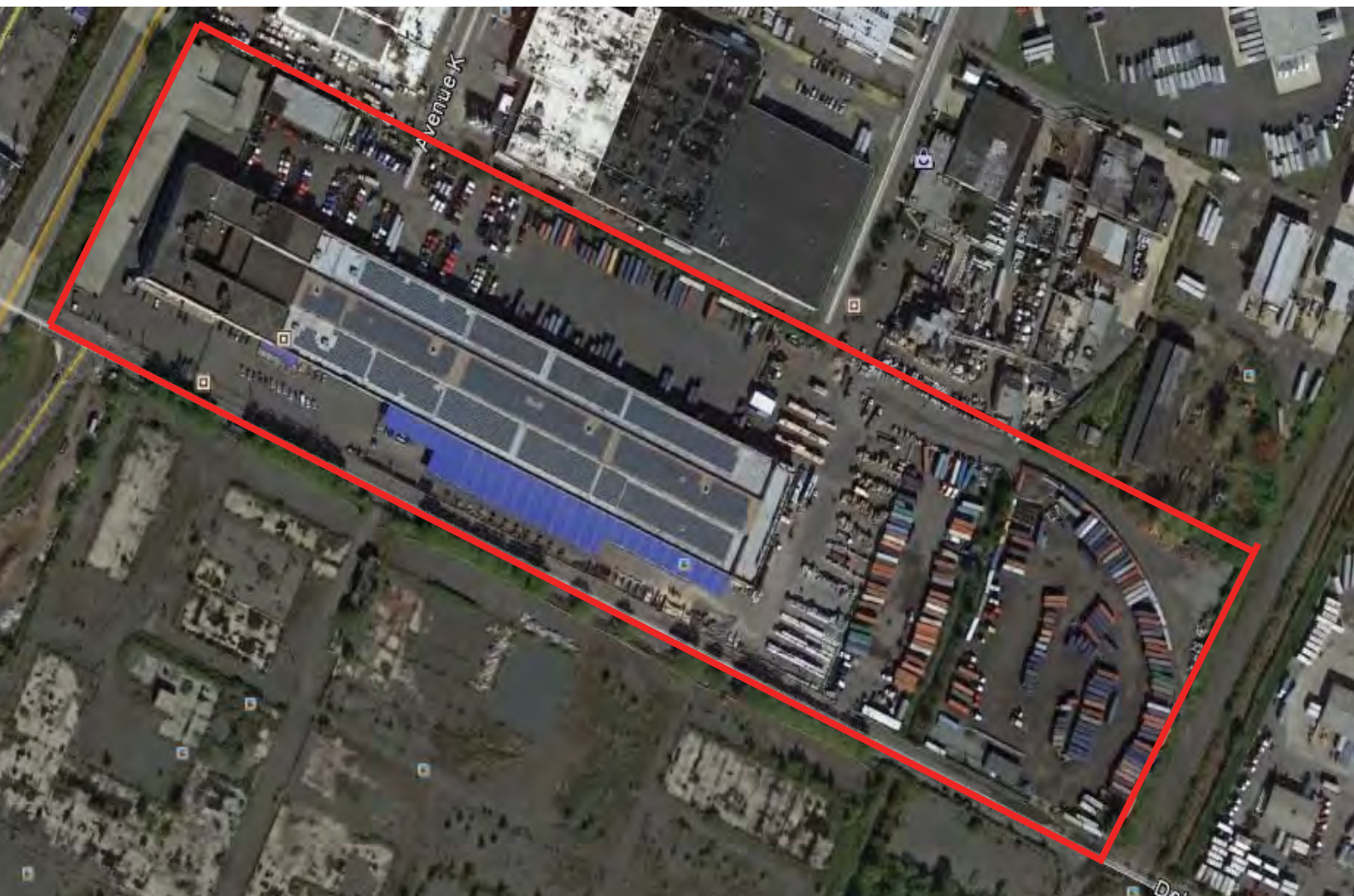
Source: Google Maps



 Property Boundary



Figure 1-C
Site Map
338 Wilson Ave (Albert Steel- Prentiss Drug)
Pierson's Creek
Newark, New Jersey



Source: Google Maps



Property Boundary



Not to Scale

Figure 1-D
Site Map
400 Delancey (Former USF Red Star)
Pierson's Creek
Newark, New Jersey



Source: Google Maps



 Property Boundary



Figure 1-E
Site Map
80 Avenue K (Manichewitz and Rokeaon)
Pierson's Creek
Newark, New Jersey



Source: Google Maps



 Property Boundary



Figure 1-F
Site Map
7 Avenue L (Globe Metals/Welch Holm and Clark)
Pierson's Creek
Newark, New Jersey

Appendix A

Activity Hazard Analysis

ACTIVITY HAZARD ANALYSIS FOR GENERAL SAFETY

[1] AHA No. 060-RICO-02MV	
[2] Work Location: Pierson's Creek Superfund Site	
[3] Task Title: Site Walk	
[4] Work Phase:	[5] List Work Groups Needed for Each Phase
A. Site Walk	A. Site Manager, Task Manager, and Geologist
B.	B.
C.	C.

[6] Activity Steps	[7] Work Groups	[8] Hazards	[9] Hazard Controls (Engineered, Operational, Documents, PPE, Qualifications)
Site Walk	A	Head injury	<ul style="list-style-type: none"> Hard hats shall be worn at all times while in a construction zone, or if designated by signs.
		Eye injury	<ul style="list-style-type: none"> When required, protective eyewear with sideshields that meet the ANSI-Z-87 standard shall be worn. Proper eyewear will be utilized while performing tasks under a hot work permit.
		Foot injury	<ul style="list-style-type: none"> Employees will wear steel-toed boots as required.
		Hand injuries	<ul style="list-style-type: none"> Leather gloves will be required if handling rough materials is necessary.
		Slip/trip hazards	<ul style="list-style-type: none"> Good housekeeping requirements and the CDM Smith Safe Think Process will be applied while conducting the site walk-through.
		Injuries resulting from individuals failing to properly responding to emergency signals and instructions	<ul style="list-style-type: none"> All employees shall have successful training. Employees shall know emergency assembly points, emergency phone numbers and first aid.
		Cold stress	<ul style="list-style-type: none"> All employees will wear clothes appropriate to the current weather conditions.

PRE-JOB BRIEFING ATTENDANCE

[illegible]

Appendix B

Workplace Guidelines and Practices

Section 9

Personal Protective Equipment (PPE)

CDM Smith employees frequently perform tasks that require the use of protective clothing and equipment to shield or isolate them from chemical and physical hazards.

The nature and extent of potential chemical and physical hazards are key factor in choosing PPE. Before mobilization, CDM Smith performs a detailed review of the project site. We review site history, types, and quantities of materials handled at the site, operations performed at the project site, and activities we will perform during the course of the project.

9.1 Use of Personal Protective Equipment

Employees must use PPE identified in H&S plans, as directed by site managers, where recognizable hazards exist, to meet client requirements and in accordance with the guidelines described in this section. Employees must also inspect PPE assigned to them and have worn out or defective equipment replaced.

Personal protective equipment in use shall be inspected daily and maintained in serviceable condition. Items of personal issue shall be cleaned and sanitized as appropriate before any other employee uses them. Defective or damaged equipment shall be taken out of service immediately.

9.1.1 “Baseline” Protection

CDM Smith employees are expected to wear the ensemble of personal protective equipment listed below during all field tasks.

- Full-length trousers ([See Section 9.2.10](#))
- Shirt with sleeves and a collar ([See Section 9.2.10](#))
- Safety glasses with side shields ([See Section 9.2.1](#))
- Hardhat ([See Section 9.2.2](#))
- Steel toe and shank footwear ([See Section 9.2.3](#))
- Protective gloves (if hands will contact rough or contaminated surfaces) ([See Section 9.2.4](#))
- High-visibility vest (if vehicles or heavy equipment operate on site) ([See Section 9.2.5](#))

9.1.2 Rules and Standards for PPE

Use of personal protective equipment is required by OSHA standards contained in 29 CFR 1910 and 29 CFR 1926, and reinforced by EPA regulations in 40 CFR Part 300. Types of protection required by OSHA and the relevant consensus standards are listed in [Table 9-2](#).

9.2 Basic Personal Protective Equipment

9.2.1 Eye Protection

Employees should wear safety glasses during field activities unless it can be demonstrated that there are no potential hazards to the eye. Such hazards include active construction sites, hazardous waste sites and potential contact between hazardous or foreign substances and the eye.

For most dusts and particulates, safety glasses with side shields meeting the requirements of ANSI standard Z87.1-2003 - Occupational and Educational Eye and Face Protective Devices are adequate. For potential splash hazards of liquids, a face shield or splash hood should be used in conjunction with regular safety glasses. In some exposures to mist or heavy dust, goggles may provide the best form of eye protection. If lasers are used, specialized eye protection using specific lenses for the wavelength and energy emitted by a specific laser may be required.

Contact Lenses – Based on current information related to the use of contact lenses in the industrial work environment, contact lenses may be used in most situations. Eye protection such as safety glasses, face shields, or goggles appropriate for the hazards present should be used as well.

9.2.2 Hard Hats

Employees should wear hard hats meeting the requirements of ANSI Z89.1 (2009) unless the safety manager grants a [waiver per Section 9.1.1](#). [no need for link here] Hard hats should be worn with the brim facing forwards unless there is a specific safety related reason to turn the hat backwards. In such instances the webbing in the hat shall be repositioned in the hat so that the back of the webbing is at the back of the head.

9.2.3 Foot Protection

Personnel should wear protective footwear when working on active construction sites, field hazardous waste sites and while performing work activities where there is a danger of foot injuries due to falling or rolling objects, objects piercing the sole, and where employees' feet are exposed to electrical hazards. Safety footwear shall meet the requirements of ASTM standards F2412-05 (Standard Test Methods for Foot Protection) and F2413-05 (Standard Specification for Performance Requirements for Foot Protection) and cover the ankle. Any footwear worn for fieldwork must have a good sturdy tread appropriate for outdoor use and a defined heel.

9.2.4 Hand Protection

Various types of gloves are available for protection against cuts, scrapes, bruises, etc. that may occur during the physical handling of material, equipment tools etc. Gloves should have the qualities required for the work conditions as set by ANSI/ISEA 105 American National Standard for Hand Protection Selection Criteria. [would a link to a glove selection table be appropriate here?] CDM Smith issues cotton, leather, nitrile, neoprene, and Kevlar® gloves depending on the work activity and potential hazards. If needed, leather or mesh work gloves can be worn over chemical protective gloves.

9.2.5 High-Visibility Clothing

High-visibility vests or jackets are required whenever personnel work in or around vehicular traffic. High-visibility clothing should meet the level of visibility required for the work conditions in ANSI / ISEA 107 (2010). Employees should also wear high-visibility clothing on active construction or industrial sites where there is frequent movement of trucks, excavation, or other heavy equipment. See [Section 16.22 Traffic and Work Zone Safety](#).

9.2.6 Protective Clothing

Personnel should wear protective clothing in circumstances where there is the potential for hazardous dusts, toxic or contaminated material, mists, or liquids contact the employee's skin or personal clothing. Protective clothing may include disposable or reusable coveralls, polymer coated coveralls, or splash suits. When there is a significant potential for direct contact of liquids or mists, polymer-coated coveralls or splash suits are indicated.

Selection consideration should be given to such factors as size, durability, chemical compatibility, and heat stress potential. Project managers are particularly reminded to consider the correct size of protective garment for very large and small workers. When ANSI/ISEA standard 103, Classification and Performance Requirements for Chemical Protective Clothing, is published, CDM Smith expects to implement its requirements.

Chemical Protective Footwear – Chemical protective footwear should be worn when there is the potential for boots to come into direct contact or be splashed with hazardous materials or waste. When direct contact hazards exist, chemical resistant boots may be worn or boot covers may be worn.

Chemical Protective Gloves – For those activities where there is a potential for direct contact with hazardous or toxic materials, or contaminated soil or groundwater, employees should wear chemical protective gloves. The selection of glove should be based on the activity and the material of potential contact. A wide variety of gloves are available and consideration should be given to dexterity, durability, and material compatibility. Gloves should have the qualities required for the work conditions as set by ANSI/ISEA 105 American National Standard for Hand Protection Selection Criteria.

Flame and Arc – Flash Protective Clothing – Fire resistant clothing used where fires or electrical arcs are a problem shall have a rating of at least HRC Level 2 as set by NFPA Code 2112 Standard on Flame Resistant Garments for Protection of Industrial Personnel against Flash Fire. NOTE: If an arc flash study described in [Section 16-4](#) requires a higher level of protection, wear that level.

9.2.7 Respirators

CDM Smith may issue a respirator to individuals who will frequently use respiratory protection. Employees who are expected to work on projects where the use of respiratory protection is anticipated or required must fulfill the training and medical approval requirements for respirators as described [in Section 11, Respiratory Protection](#) of this manual.

9.2.8 Hearing Protection

Employees shall use hearing protection when noise levels exceed the allowable limit. A Hearing Conservation Program (Section 14) shall be implemented if the allowable limits are exceeded. Devices used for hearing protection shall be certified for the purpose per USEPA regulation [40 CFR 211 subpart B Noise Labeling Standards for Hearing Protection Devices](#).

9.2.9 Specialized Protective Equipment

Specialized protective equipment is available for a wide variety of activities and includes:

- Fall protection harnesses and lanyards (See [Safety Guideline 16.7](#))
- Face shields
- Chaps for work in rough brush
- Spark resistant tools
- Shin guards for chain saws
- Cooling vests (See [Safety Guideline 16.13](#))
- Personal floatation devices

9.2.10 Personal Work Clothing

Employees are expected to supply personal clothing appropriate for their work assignments including long pants, a shirt with sleeves (at least 4" long). NOTE: Some CDM Smith clients insist that employees wear long-sleeve shirts.)

Employees are expected to provide basic outerwear appropriate for protection against normal weather conditions in the geographical areas they are normally assigned. The equipment centers do stock clothing for extreme cold or wet weather. (See [Safety Guideline 16.14.](#)) These include rain suits, insulated coveralls, cold weather work gloves, hardhat liners, etc. Employees may request this equipment directly from the equipment centers.

9.3 Availability of PPE

CDM Smith field equipment centers maintain an inventory of basic PPE including hard hats, safety glasses, hearing protection, harnesses, traffic vests, etc. The specific make and model of equipment is reviewed periodically by the H&S managers to ensure equipment issued to CDM Smith Inc. personnel is of adequate quality. Projects and employees may obtain basic PPE by requesting equipment from the field equipment centers by telephone or through the field equipment center website at <http://cdmweb/fieldequipment/>.

9.3.1 PPE Assigned to the Employee

CDM Smith typically assigns items such as hardhat, safety glasses, hi-visibility vests etc to individual employees. The employee's Group Leader or Direct Manager, in consultation with the H&S Manager assigned to support the employee's division, shall decide what PPE employees need, based on their expected role, and help to arrange for

it. Employees may, with the approval of their manager or group leader, submit a [PPE request](#).

PPE required for use on CDM Smith work activities is provided to CDM Smith employees at no expense to the employee.

9.3.2 Project vs. Overhead Expense

PPE that is used to support activities for specific projects should be charged to those projects. Typical project specific PPE would include consumables such as gloves, disposable Tyvek® suits, respirator cartridges, etc. Non - disposable PPE, used on a specific project can be obtained from the equipment centers for short or moderate durations on a rental basis. In some cases it may be more cost effective for projects to have the equipment centers purchase the equipment for the project. Non-disposable PPE may include respirators, air-supplied respiratory protective systems, or specialized chemical protective clothing. The specific PPE ensemble for a specific project will be identified in the project specific H&S plan and approved by the service group H&S manager responsible for that project.

Employees may request equipment using the Personal Protective Equipment Request form in Appendix A of this section. Individual PPE that is assigned to a specific employee for use on multiple projects should be charged to the employee's division safety equipment overhead number, typically 0000 <DIV> ADMIN.SAFQP. The employee's Group Leader or Direct Manager, with the advice of the relevant health and safety manager, shall decide what PPE may be charged to an overhead account.

Reimbursement for Safety Footwear – CDM Smith will reimburse CDM Smith employees for the cost of purchasing safety footwear up to a maximum amount of \$150.00.

Reimbursement for Prescription Safety Glasses – CDM Smith employees, who require prescription glasses and are expected to work more than 30 days per year in the field or on locations where safety glasses are required, will be reimbursed for the cost of prescription safety glasses meeting the requirements of ANSI Z87.1 up to a maximum of \$175.00. Employees who wear prescription glasses and work less often on projects that require the use of safety glasses should be provided eye protection that fits over their glasses.

Employees may request reimbursement through the expense account system from their resource manager or group leader. The resource manager or group leader shall make the final determination as to whether or not safety glasses are a reimbursable item as described above.

Employees are eligible for this allowance whenever their existing equipment becomes unsafe to use. If, for example, pair of safety glasses breaks the day after CDM Smith pays for them, the employee is eligible to use the allowance again. If the steel-toe shoes are still fully functional 15 years after purchase, the employee is not.

9.4 Levels of Protection

Each type of protective equipment has been designed specifically to protect against a reasonably anticipated chemical and physical hazard. To standardize PPE ensembles, “levels of protection” have been defined to address those chemical and physical hazards that may be present at hazardous waste sites. The levels of protection are defined accordingly:

<i>Level A</i>	This level is worn when the highest level of respiratory, skin, and eye protection is anticipated as being required.
<i>Level B</i>	This level is worn when the highest level of respiratory protection is anticipated as being required, with a lesser level of skin protection being necessary.
<i>Level C</i>	This level is worn when criteria for air-purifying respirators are determined to be necessary and a lesser level of skin protection needed.
<i>Level D, Modified</i>	This level is worn when activities do not pose a problem from a respiratory protection point of view but may present a skin problem and where cross contamination via shoes needs to be considered.
<i>Level D</i>	This level is worn when activities and areas do not present a respiratory or skin hazard.

Detailed equipment, use, and limitations associated with each level of protection appear in **Table 9-1**.

Table 9-1				
Levels of Protection				
Level	Equipment	Protection Provided	Should be Used When:	Limiting Criteria
A	<p>Recommended:</p> <ul style="list-style-type: none"> Pressure-demand, full facepiece self-contained breathing apparatus (SCBA) or pressure-demand supplied-air respirator with escape SCBA Full-encapsulating, chemical-resistant suit Inner chemical-resistant gloves Chemical-resistant safety boots/shoes Two-way radio communications <p>Optional:</p> <ul style="list-style-type: none"> Cooling unit Coveralls Long cotton underwear Hard hat Disposable gloves and boot covers 	The highest available level of respiratory, skin, and eye protection	<ul style="list-style-type: none"> The chemical substance is thought to require the highest level of protection for skin, eyes, and the respiratory system based on either: <ul style="list-style-type: none"> Measured (or potential for) high concentration of atmospheric vapors, gases, or particulates Site operations and work functions involving a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through intact skin Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible Operations must be conducted in poorly ventilated areas until the absence of conditions requiring Level A protection is determined 	<p>Fully encapsulating suit material must be impermeable to the substances involved</p> <p>The use of Level A protection severely limits the practical duration of work effort.</p>

Table 9-1 (Continued)

Level	Equipment	Protection Provided	Should be Used When:	Limiting Criteria
B	<p>Recommended:</p> <ul style="list-style-type: none"> Pressure-demand, full-facepiece SCBA or pressure-demand supplied air respirator with escape SCBA Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one-piece chemical splash suit; disposable chemical resistant one-piece suit) Inner and outer chemical-resistant gloves Chemical-resistant safety boots/shoes Hard hat Two-way radio communications <p>Optional:</p> <ul style="list-style-type: none"> Coveralls Disposable boot covers Face shield Long cotton underwear 	<p>The same level of respiratory protection but less skin protection than Level A</p> <p>It is the minimum level recommended for initial site entries until the hazards have been further identified</p>	<ul style="list-style-type: none"> The type and atmospheric concentrations of substances have been identified and require a high level of respiratory protection, but less skin protection. This involves atmospheres: <ul style="list-style-type: none"> With IDLH concentrations of specific substances that do not represent a severe skin hazard or That do not meet the criteria for use of air-purifying respirators Atmosphere contains less than 19.5 percent oxygen Presence of incompletely identified vapors or gases is indicated by direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin 	<p>Used only when the vapor of gases present are not suspected of containing high concentrations of chemicals that are harmful to skin or capable of being absorbed through the intact skin</p> <p>Use only when it is highly unlikely that the work being done will generate either high concentrations of vapors, gases, or particulates or splashes of material that will affect exposed skin</p>

Table 9-1 (Continued)

Level	Equipment	Protection Provided	Should be Used When:	Limiting Criteria
C	Recommended: <ul style="list-style-type: none"> Full-facepiece, air-purifying, cartridge-equipped respirator Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one-piece chemical splash suit; disposable chemical-resistant one-piece suit Inner and outer chemical-resistant gloves Chemical-resistant safety boots/shoes Hard hat Two-way radio communications Optional: <ul style="list-style-type: none"> Coveralls Disposal boot covers Face shield Escape mask Long cotton underwear 	The same level of skin protection as Level B, but a lower level of respiratory protection	<ul style="list-style-type: none"> The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any exposed skin The types of air contaminants have been identified, concentrations measured, and a cartridge is available that can remove the contaminant All criteria for the use of air-purifying respirators are met 	<p>Effective only against conditions that are fairly well understood.</p> <p>Not effective for conditions that involve:</p> <ul style="list-style-type: none"> Unknown chemicals that the filtering element might not remove well Oxygen-deficient atmospheres Unpredictable concentrations that might overwhelm the filtering element
D MODIFIED	Recommended: <ul style="list-style-type: none"> Chemical-resistant outer gloves Disposable shoe covers Work clothes Safety boots/shoes Safety glasses or chemical splash goggles Hard hat 	No respiratory protection; minimum skin protection	<ul style="list-style-type: none"> The atmosphere contains no known hazard Work functions may involve skin contact with hazardous chemicals 	

<p>Table 9-2</p> <p>OSHA & Consensus Standards for Personal Protective Equipment</p>		
Type of Protection	Regulation	Reference
General	29 CFR 1910.132	41 CFR Part 50-204.7 General Requirements for Personal Protective Equipment
Eye and Face	29 CFR 1910.133(a)	ANSI standard Z87.1-2003 - Occupational and Educational Eye and Face Protective Devices
Noise Exposure	29 CFR 1910.95	USEPA 40 CFR 211 subpart B
Respiratory	29 CFR 1910.134	ANSI- ¹ Z88.2 (1992) Standard Practice for Respiratory Protection
Hand	29 CFR 1910.132	ANSI/ISEA 105 American National Standard for Hand Protection
Head	29 CFR 1910.135	ANSI Z89.1 (2009) Safety Requirements for Industrial Head Protection
Foot	29 CFR 1910.136	ASTM F2412-05 and F2413-05
Electrical Protective Devices	29 CFR 1910.335(a)(2)	NFPA 70E: Standard for Electrical Safety in the Workplace
Flame – Resistant Garments	29 CFR 1910.335(a)(2)	NFPA Code 2112 Standard on Flame Resistant Garments
Chemical Protective Clothing	29 CFR 1910.132	ANSI/ISEA standard 103, Chemical Protective Clothing (Draft)
High-Visibility Safety Apparel	29 CFR 1926.651(d)	ANSI / ISEA 107(2010) National Standard for High-Visibility Safety Apparel

¹ American National Standards Institute (ANSI), <http://www.ansi.org/>

Appendix A

Personal Protective Equipment Request Form

Employee _____ Division _____ Office _____

Active in CDM Smith Medical Surveillance Program? Yes ____ No ____

Date of last CDM Smith medical exam? _____

Equipment Requested

<u>Item</u>	<u>Requested</u>	<u>Issued</u>
Hard Hat	_____	_____
Safety Glasses	_____	_____
Hi-Visibility Vest	_____	_____
Fall Protection Harness	_____	_____
Work Gloves (____ pairs)	_____	_____
Glove Liners (____ pairs)	_____	_____
Electrical Gloves (____ pairs)	_____	_____
Rain suit	_____	_____
Cloth Coveralls	_____	_____
Fire - Resistant Coveralls	_____	_____
Insulated Coveralls	_____	_____
Goggles	_____	_____
Ear Muffs (____ pairs)	_____	_____
Respirator	_____	_____
Make _____		
Model _____		
Size _____		
Corrective Lens Inserts	_____	_____
_____	_____	_____
_____	_____	_____

You must take reasonable measures to safeguard the items issued to you. Should your employment with CDM Smith terminate for any reason you must return equipment issued for your use. Any loss, theft, or damage of the equipment should be reported promptly to the Equipment Center manager.

Approved by:

Group Leader or Direct Manager/Date

Division

Charge Number

16.14 Cold Stress

Persons working outdoors in low temperatures, especially below freezing, or in wet or snowy weather are potentially subject to cold stress disorders. Factors that contribute to cold stress exposure include temperature, humidity, wind, sunlight, rain, snow, fog, exposure duration, clothing, and work activity. Individual susceptibility to cold stress disorders can vary widely. Individual physical factors that can affect a person's response to cold work environments include a person's general fitness and age.

The following guidelines should be considered when working in ambient air temperatures below 40°F, especially when other contributing weather conditions such as snow, rain, or wind are present.

16.14.1 Hazards Associated with Cold Stress

Hypothermia – Hypothermia results from a cooling of the body's core temperature and if left unattended can become a serious condition. Hypothermia can result in the loss of physical skills and impair judgment thereby contributing to the potential for other accidents. Severe hypothermia can result in death. Hypothermia can occur at temperatures above freezing as well as below.

- Symptoms include shivering, teeth chattering, fumbling hands, slurred speech, and loss of coordination. Eventually, the pulse and respiratory rate may slow. The victim may appear blue or lose color in the face.
- Treatment for hypothermia is to catch symptoms early and move the individual to a warm environment indoors or in a vehicle. If a warm location is not immediately available, the victim should be sheltered from the wind and provided extra clothing such as coats or blankets and observed to determine if their condition is improving. If the victim continues to deteriorate and becomes colder, they should be transported to a medical facility for assistance.

Frostbite – Frostbite is a condition in which the fluids around cells of body tissue freeze. The condition can lead to body tissue damage. The most vulnerable parts of the body are the nose, ears, cheeks, fingers, and toes.

- Symptoms of frostbite include body parts becoming white, firm, cold to the touch, and may feel waxy. The victim will not feel pain in the affected area.
- Treatment of frostbite requires that the victim be brought to a warm environment and the affected areas be allowed to thaw and warm. If frostbite has progressed beyond small patches of skin and affects whole body parts such as a hand, foot, or ear, the victim should be transported to a medical facility for treatment and observation.

16.14.2 Cold Stress Monitoring

Personnel should monitor themselves and each other for signs and symptoms of frostbite and/or hypothermia. If symptoms are observed in an employee or

subcontractor, steps should be taken to treat the symptoms by having the individual go to a warm environment either in a nearby structure or vehicle.

16.14.3 Cold Stress Control and Prevention

Cold stress can easily be prevented with proper planning and prevention. Some basic controls and preventative measures are listed below:

- Forecasted conditions. Consider the effect of wind chill (Table 16-2 on next page).
- Dress in layers and stay dry. Avoid cotton clothing such as socks or T-shirts. Bring extra clothing.
- Wear hardhat liners and gloves. Wear rain gear in rain and snow.
- Curtail work if extreme weather conditions such as a blizzard, extreme wind chill (e.g., less than 0°F), torrential cold rains, or wind is expected.
- For long-term projects in cold environments, consider setting temporary structures with portable heaters.
- Take warming breaks as needed.
- Avoid beverages with caffeine, alcohol, or medications that restrict blood flow.
- Drink warm noncaffeine beverages such as hot chocolate or soups on breaks.

Table 16-2
Windchill Index

WINDCHILL INDEX												
Cooling Power of Wind on Exposed Flesh Expressed as an Equivalent Temperature (under calm conditions)												
Estimated Wind Speed (in mph)	Actual Temperature Reading (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Chill Temperature (°F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
Wind speeds greater than 40 mph have little additional effect	LITTLE DANGER in < hour with dry skin. Maximum danger of false sense of security.				INCREASING DANGER Danger from freezing of exposed flesh within 1 minute.				GREAT DANGER Flesh may freeze within 30 seconds.			
	From <i>Fundamentals of Industrial Hygiene</i> , Third Edition. Plog, B.A., Benjamin, G. S., Kerwin, M.A., National Safety Council, 1988.											

16.22 Traffic and Work Zone Safety

These guidelines apply whenever CDM Smith employees or subcontractors work in areas exposed to vehicular traffic on public streets or highways.

- Where vehicular traffic hazards exist because of work at locations near public streets or roads, a system of traffic and work zone controls should be developed to mitigate the hazard. The system should meet the requirements of Part 6 of the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration, or the applicable state version of the MUTCD.
- In general, when the MUTCD allows the use of traffic safety direction devices, such as cones, CDM Smith will supplement those direction devices with a physical barrier, such as a truck.
- All traffic control systems on public roads must be coordinated with local traffic control officials as required by applicable law.
- Periodically evaluate effectiveness of temporary traffic control setups by walking or riding the job area looking for evidence of poor controls and near misses such as swerving traffic, motorists braking quickly, skid marks, blind spots, etc.
- Give motorists plenty of advanced warning of upcoming work zones.
- All employees working within designated work zones or near vehicular traffic should wear high-visibility clothing such as orange, yellow, or yellow-green shirts, jackets, or vests. During wet or inclement weather, similarly colored rainwear should be worn.
- During night work, between the hours of sunset and sunrise, high-visibility clothing should incorporate reflective striping or fabric and be visible at a distance of 1,000 feet. This clothing should meet ANSI standard #107 for High Visibility Safety Apparel.
- All employees working near traffic and vehicles must maintain situational awareness at all times. Stay mindful that warning signs and cones inform drivers to take action but that some drivers may not pay attention, and vehicles may still enter the work zone.

16.24 Distracted Driving and Cell Phone Safety

Anything that distracts you from the primary task of driving can put your life at risk. These distractions may include:

- Texting
- Using cell phones or smartphones
- Using other devices, such as tablets or laptops
- Using a navigation system
- Eating and drinking
- Talking to passengers
- Grooming
- Using audio or video systems

National Highway Traffic Safety Administration (NHTSA) data from 2010 shows that 17% (899, 000) of all police-reported vehicle accidents involved driver distraction in some form. Of these, 26,000 involved distraction by devices or vehicle controls while driving.

An NHTSA survey in 2011 estimates that at any given daylight moment 660,000 vehicles are driven by people using hand-held cell phones.

16.24.1 Cell Phone Use and Driving

Cell phone use and text messaging comprise two of the primary sources of distracted driving. According to a 2011 study by the Centers for Disease Control and Prevention (CDC), 69 % of U.S. drivers aged 18-64 reported use of cell phones while driving in the previous 30 days - and 31% reported they had read or sent texts or emails while driving at least once. Since text messaging involves all of the major types of distractions - visual, physical, and mental – it is clearly one of the most dangerous.

Many organizations, including the U.S. Department of Transportation, NHTSA, Federal Motor Carrier Safety Administration, and CDC have published guidance regarding the use of cell phones while driving. State laws also regulate distracted driving, and can be found at the following: http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html.

In order to minimize risks and help protect the lives of employees and others, CDM Smith has implemented a policy for cell phone use while driving. Employees are expected to comply with the following while engaged in CDM Smith activities:

- Minimize the use of cell phones while driving. To the extent possible, place calls ahead of time while in the office or at home. If on the road, pull over to a safe location and then make your calls.
- Avoid answering incoming calls while driving. Let your voice mail answer it and call the person back after you have parked the vehicle at a safe location.
- Do not text by hand while driving. Texting by hand is prohibited for all drivers engaged in CDM Smith activities. This includes both sending and reading texts. Although phones and devices with hands-free texting are available, this is not considered a safer option and is strongly discouraged by CDM Smith. A Texas A&M Transportation Institute study reported that texting by hand or texting by voice were equally dangerous while driving, and showed similarly delayed response times during each.
- Use a hands-free system and limit the time of the call when cell phones are absolutely

necessary while driving. All non-critical communications should be resumed at a more convenient time. Note that many jurisdictions prohibit the use of hand held phones, and that many clients prohibit any use of cell phones while driving for their work. Employees are required to comply with all local laws and client contract requirements.

- Engage in short conversations. If lengthy discussions are required, suspend the conversation and find a safe place to stop and park before continuing the discussion.
- Do not take notes while talking on the phone and driving. (This may seem silly, but was not an uncommon observation made by the authors of an NHTSA report.)

16.24.2 Other Distractions While Driving

Cell phones are not the only distractions encountered while driving. Navigation systems, which provide global positioning system (GPS) assistance, are commonly used during work activities. Much like a cell phone, they can cause you to lose focus if used while driving. So, too, can video displays, audio systems, and a variety of other distractions. Employees are expected to comply with the following policy regarding other distractions while driving:

- Obtain directions from navigation systems while parked in a safe location. Do not attempt to search or find new locations on the device while driving.
- Place navigation devices in a location that easily allows you to see the screen, but does not block your line of site or view of oncoming traffic.
- Review state laws for use of navigation systems. Some states restrict their use.
- Limit your adjusting of audio systems (e.g., radio, CD player, device, etc.) while driving. Wait to change devices or perform adjustments until parked in a safe location.
- Do not eat or drink while you are driving. Plan for meals and snacks beforehand. It is worth the extra time to stop if it means you will arrive safely.
- Only read maps while parked, and memorize the directions you need. If necessary, have a passenger explain the directions to you.
- Do not attempt to read any other material (e.g., documents, reports, drawings, books) while driving.
- Avoid engaging in personal grooming or hygiene. Again, this can be performed when parked in a safe location.

Additional information related to distracted driving can be found at the following websites:

<http://www.distraction.gov/get-the-facts/facts-and-statistics.html>

<http://www-nrd.nhtsa.dot.gov/Pubs/812012.pdf>

<http://www.nhtsa.gov/Research/Human+Factors/Distracted>

http://www.cdc.gov/Motorvehiclesafety/Distracted_Driving/

16.24.3 Cell Phone Use While Working

Although helpful during work activities, using cell phones can also distract users and limit their ability to safely perform other tasks at the same time. Employees are expected to follow these basic principles when using cell phones during work:

- Avoid walking around job sites while using a cell phone. Cell phone use can impair

your ability to identify and prepare for hazards – e.g., construction sites have constantly moving equipment and require your full attention.

- Do not use your cell phone while engaged in physical tasks, unless it is critical.
- Use hands-free devices when possible, but remember that research has shown hands-free conversation still causes mental distraction, and may impact your ability to focus on mental and physical cues.
- Keep your eyes focused on the path you are traveling, and stay alert for moving traffic, persons, and equipment.

16.24.4 Radio Frequency Radiation

Peer reviewed journals and government agencies have evaluated the link between radio frequency exposure and cell phone use. Some of the conclusions are listed below:

- Numerous studies looking at the use of hand-held cell phones and risk of brain cancer have indicated no association between the use of cell phones and risk of brain cancer. This includes two studies published in the Journal of the American Medical Association and the New England Journal of Medicine (NEJM).
- Some of the studies conducted have indicated there are biological effects associated with exposure to the types and levels of radio frequency radiation associated with cell phone use; however, there is no consensus that these effects are harmful to people.
- An editorial published in the NEJM referencing a study published in its January 2001 issue concluded, “This study allays fears raised by alarmist reports that the use of cell phones causes brain tumors. Of course, we do not have the final word on this question, and results of future investigations may modify our perspective. Nevertheless, we believe that it is highly unlikely that the use of cell phones substantially increases the risk of brain tumors.”

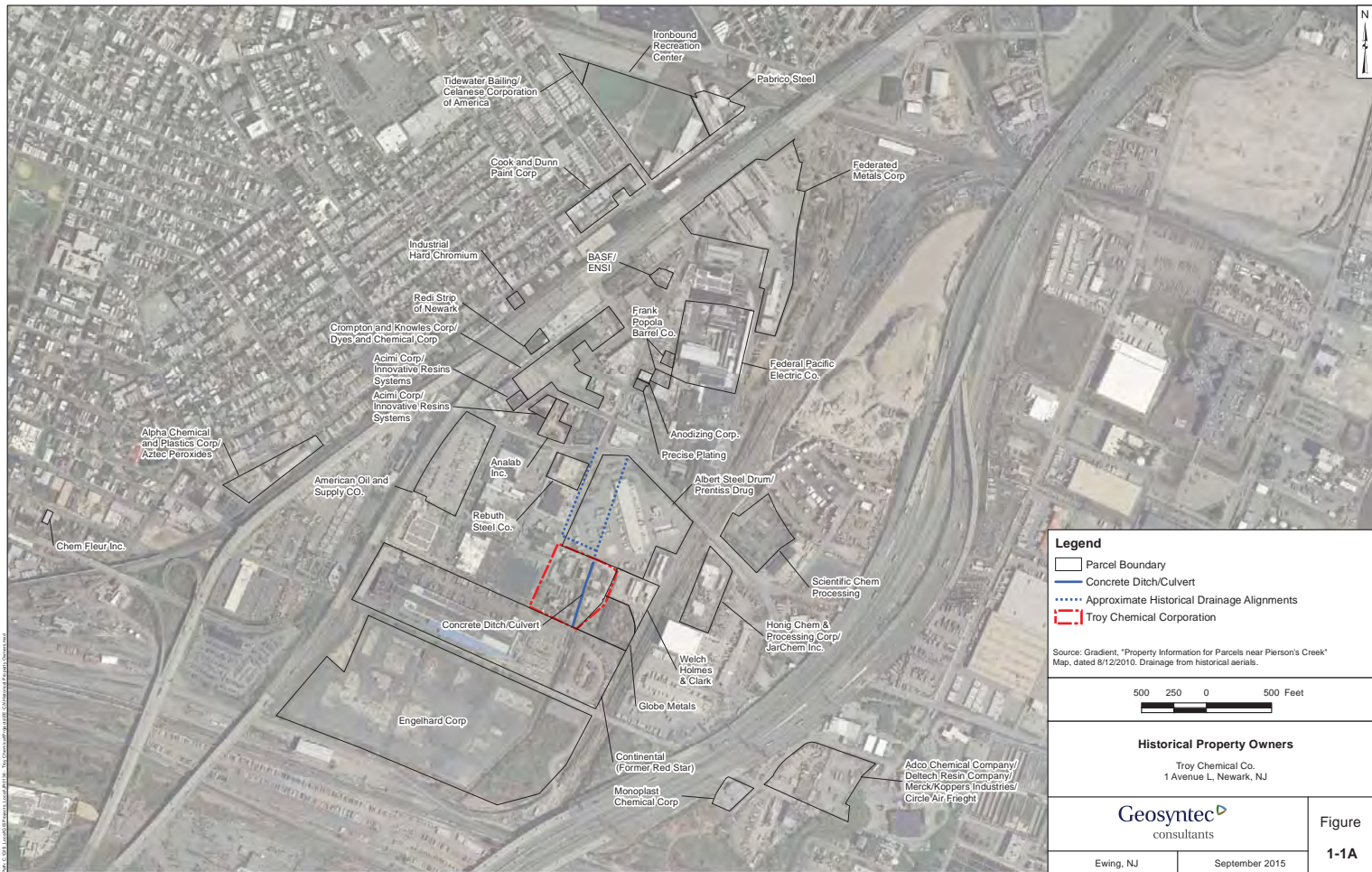
Based on the information currently available, there is not a significant health hazard associated with radio frequency radiation exposure related to cell phones.

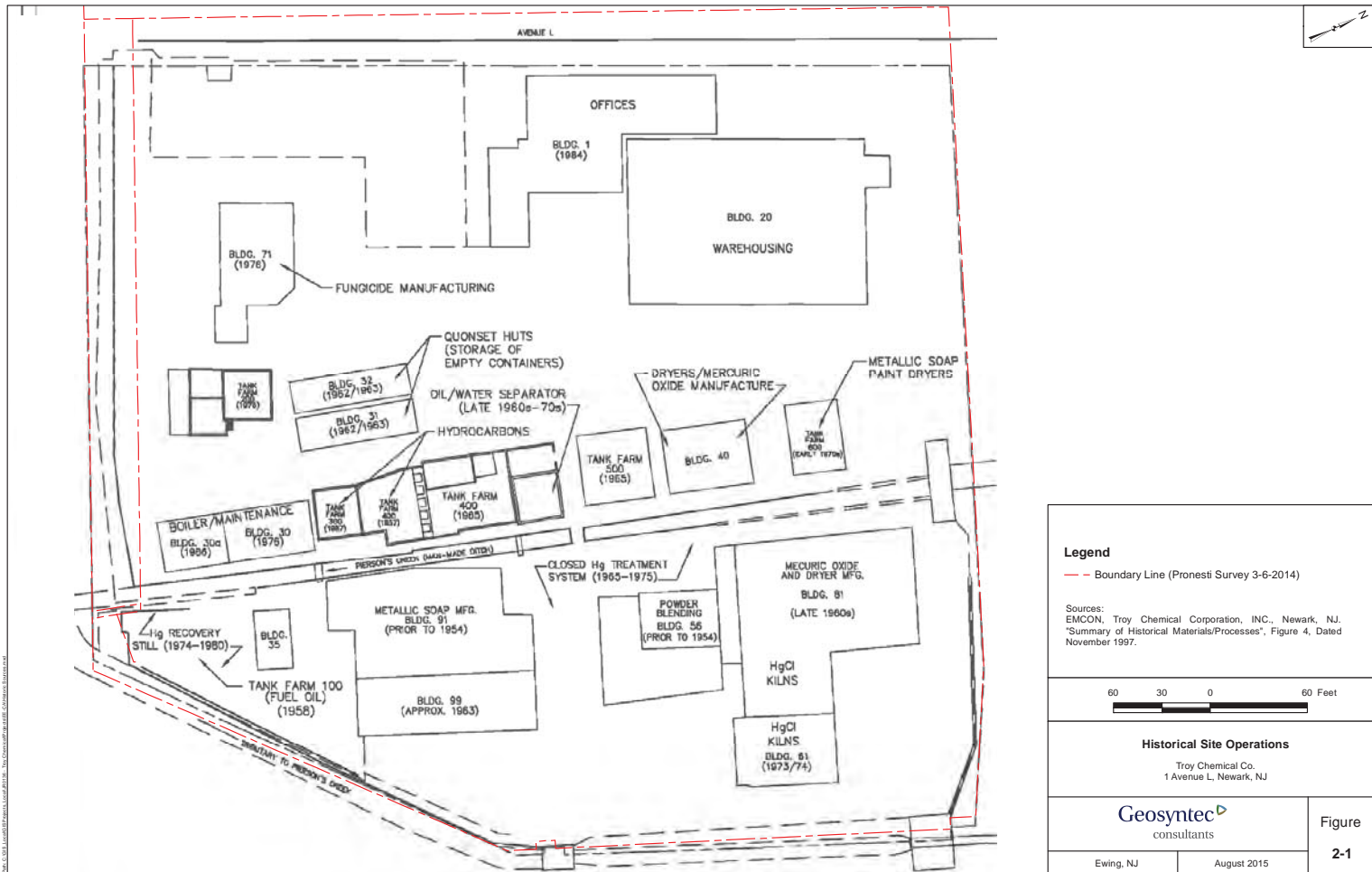
Appendix C

Site Plan Figures

Appendix A

Troy Chemical





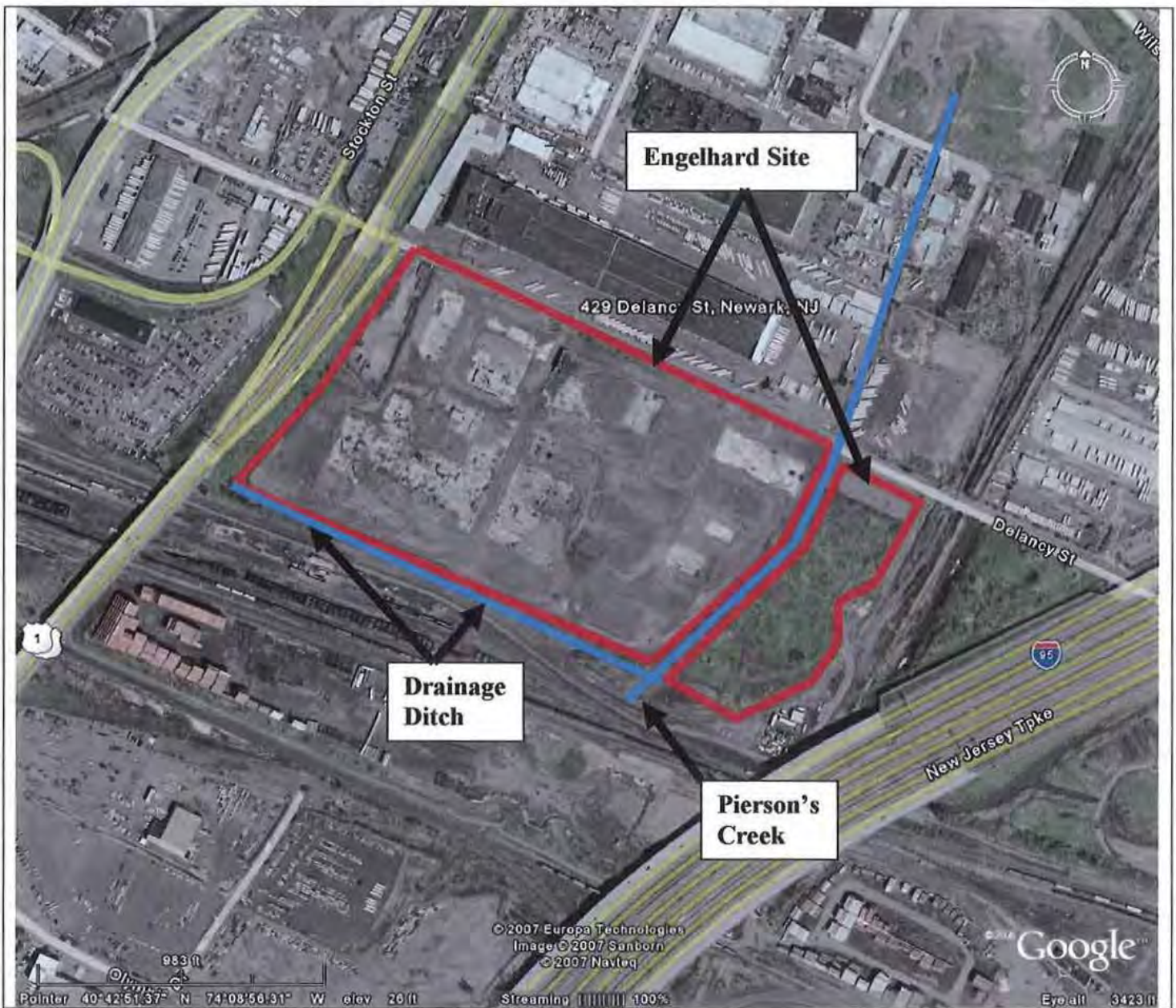




Appendix A

429 Delancey Street
(Former Engelhard Corporation)

The following annotated aerial photograph identifies the approximate location of Engelhard Newark Site in Newark, New Jersey:



Engelhard Corporation
429 Delancy Street
Newark, Essex County, New Jersey

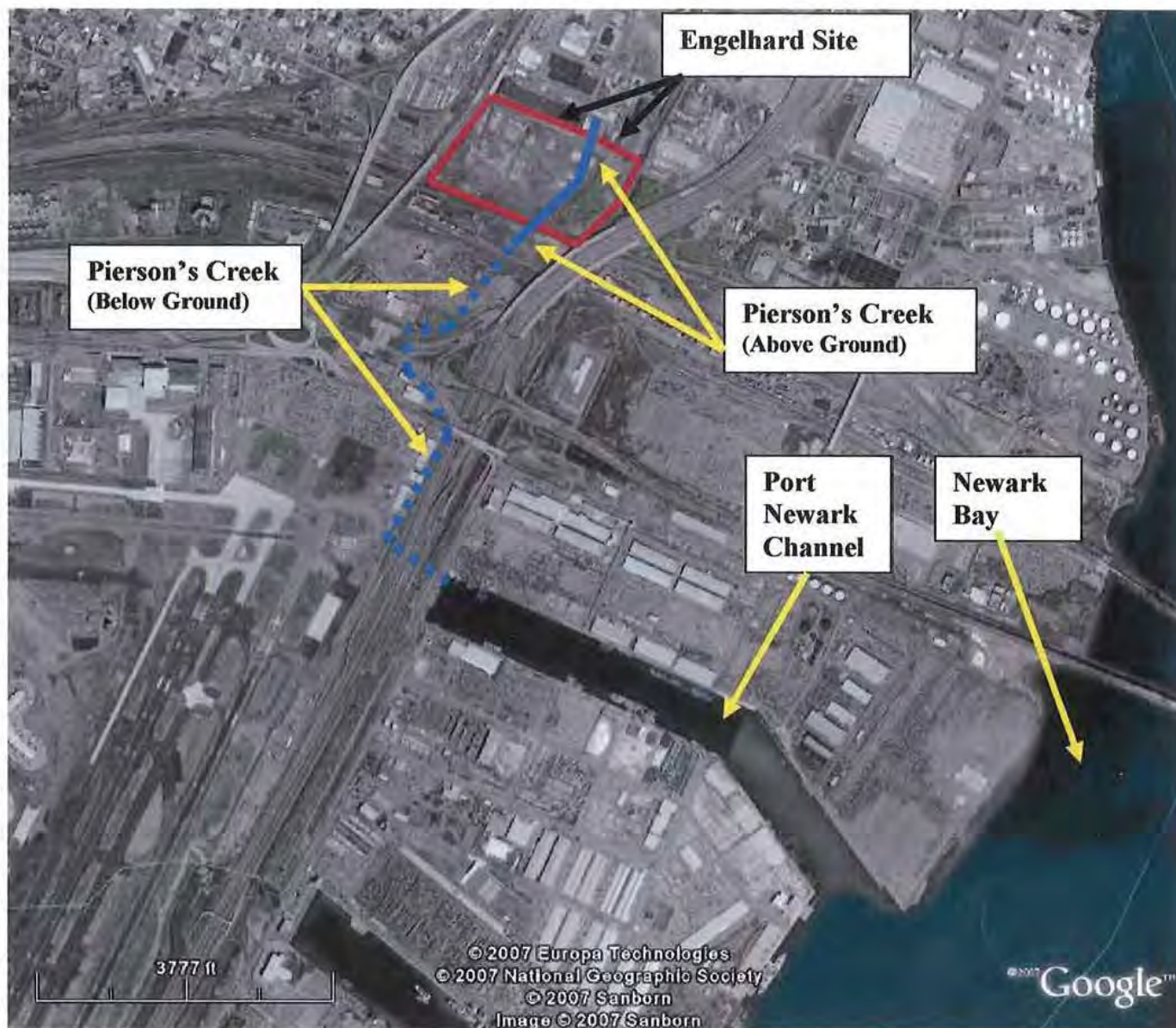
Aerial Photograph copyright 2007
Photo Source: Google Earth (Europa Technologies/Sanborn/Navteq)

Site boundary line locations as shown are approximations

The Engelhard Newark Site is comprised of several tracts: the developed western portion (approximately 31.4 acres), and the eastern portion (approximately 8.5 acres) that is thickly vegetated and undeveloped, except for an asphalt-paved parking lot at the corner of Delancy St. and a private road owned by Conrail. The Site, which is bisected along the eastern third by Pierson's Creek, is bounded on the north by Delancy St.; on the east by a Conrail access road and railroad tracks, across which is an undeveloped lot owned by the Newark Housing Authority,

beyond which is the New Jersey Turnpike (Interstate Highway 95); on the south by a drainage ditch that flows east to join Pierson's Creek, across which is Conrail's Oak Island Junction; and on the west by U.S. Highways 1 and 9. BAA000002, BAA000003, BAA000033

Provided below is an expanded aerial view of the Engelhard Site relative to Pierson's Creek, the Port Newark Channel, and Newark Bay:

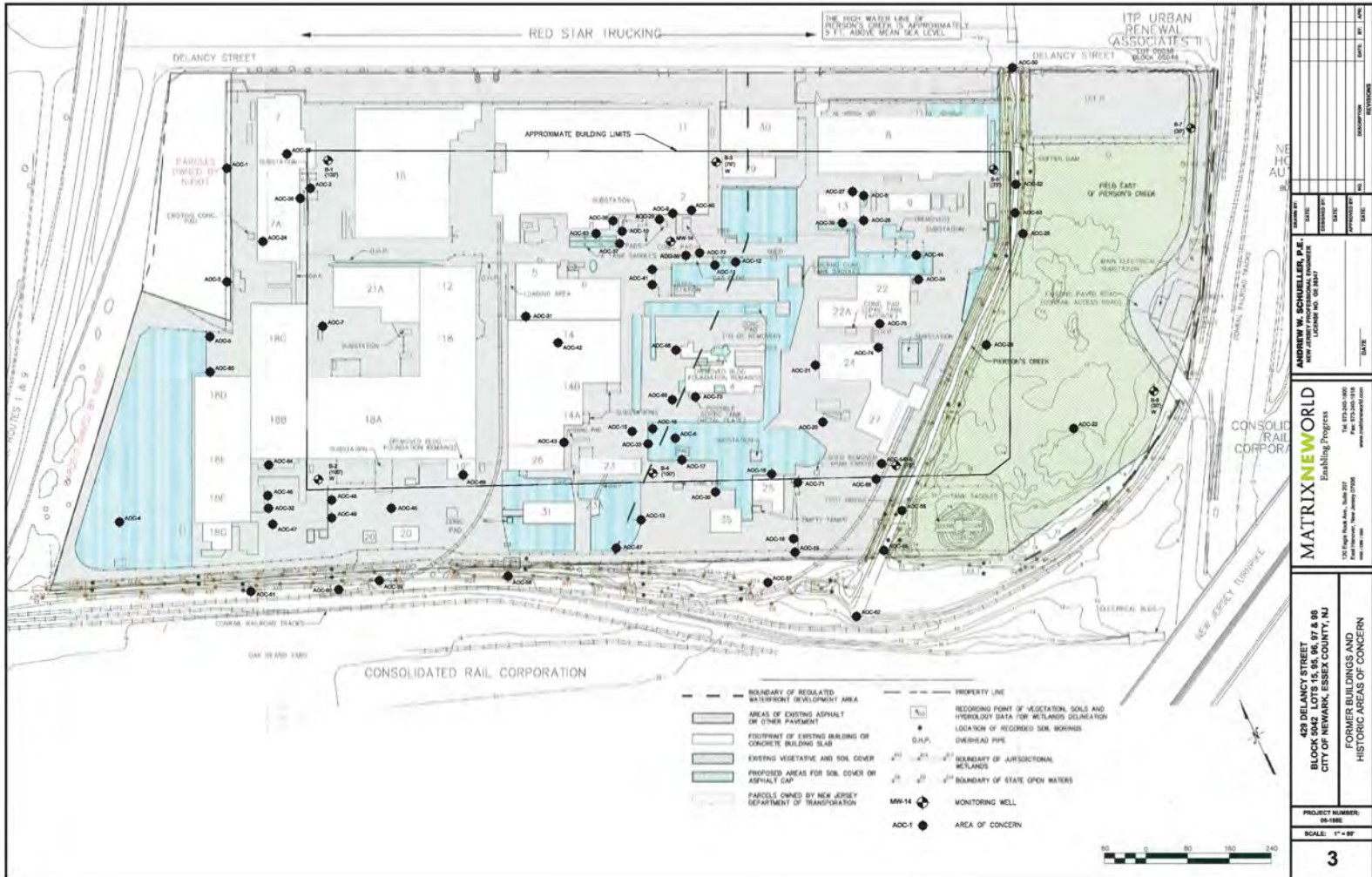


Engelhard Corporation
Expanded Aerial Photograph View

Aerial Photograph copyright 2007

Photo Source: Google Earth (Europa Technologies/National Geographic Society/Sanborn)

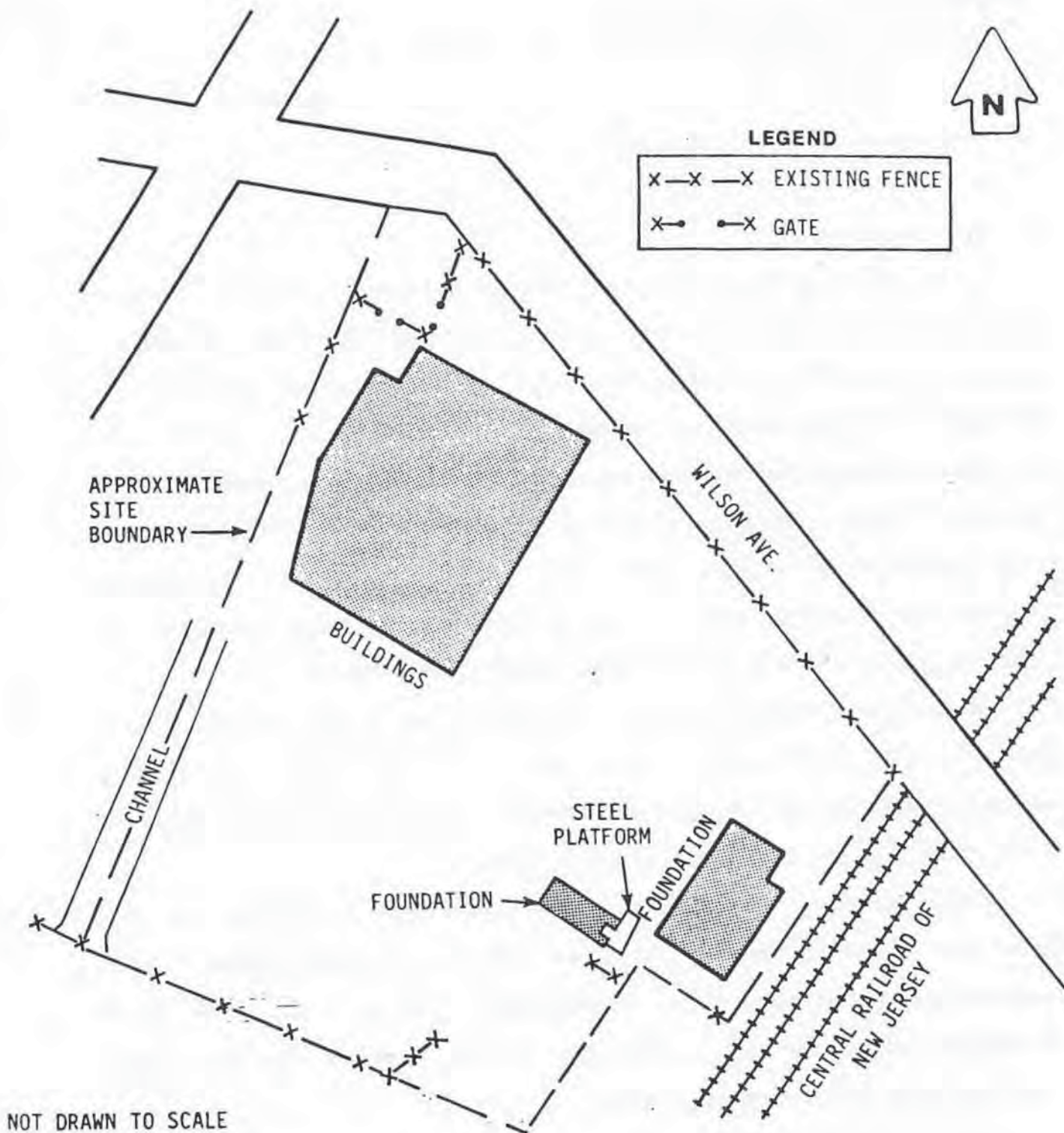
Site boundary line locations and drainage features as shown are approximations only



MATRIXNEWORLD Enabling Progress 100 Eagle Road, Suite 200 East Windsor, New Jersey 07006 Tel: 973.345.1900 Fax: 973.345.1918 www.matrixnewworld.com		CONSOLIDATED RAIL CORPORATION 409 DELANCY STREET BLOCK 5042 LOTS 15, 16, 17 & 18 CITY OF NEWARK, ESSEX COUNTY, NJ FORMER BUILDINGS AND HISTORIC AREAS OF CONCERN
PROJECT NUMBER: 09-1986		SCALE: 1" = 50'
DATE:		3

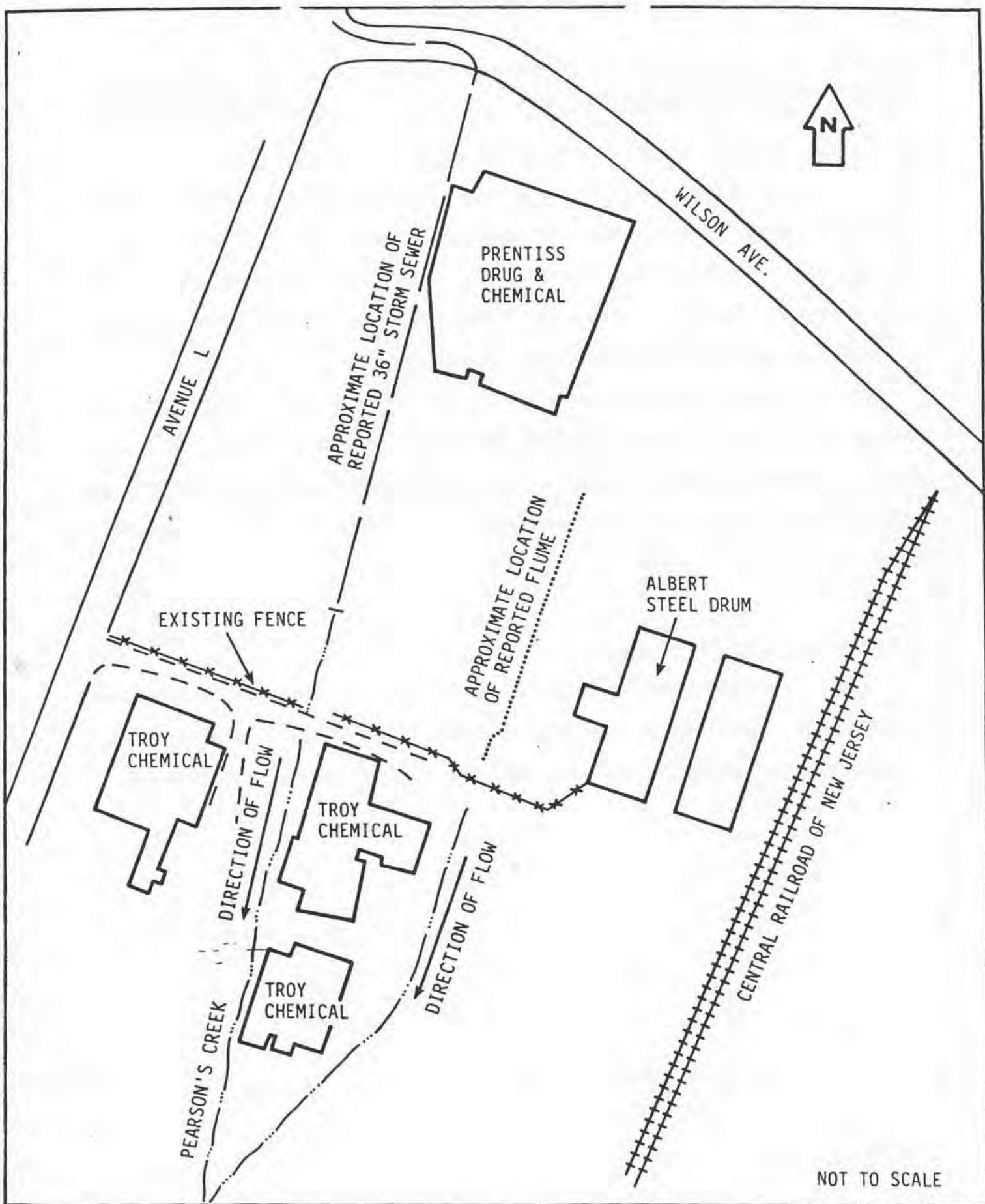
Appendix A

338 Wilson Ave
(Albert Steel/Prentiss Drug)



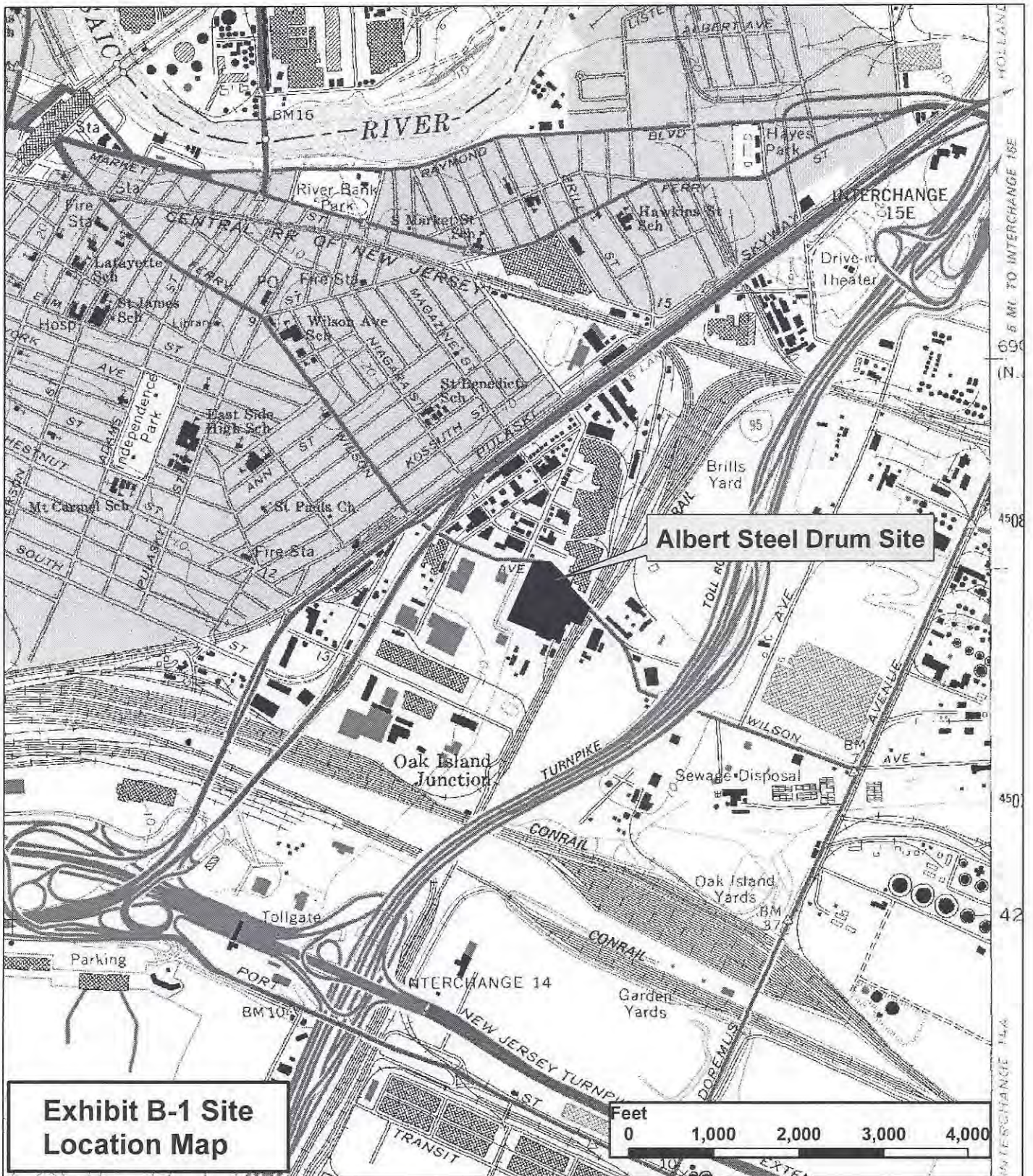
ALBERT STEEL DRUM/PRENTISS DRUG & CHEMICAL

Figure 2. Site Map



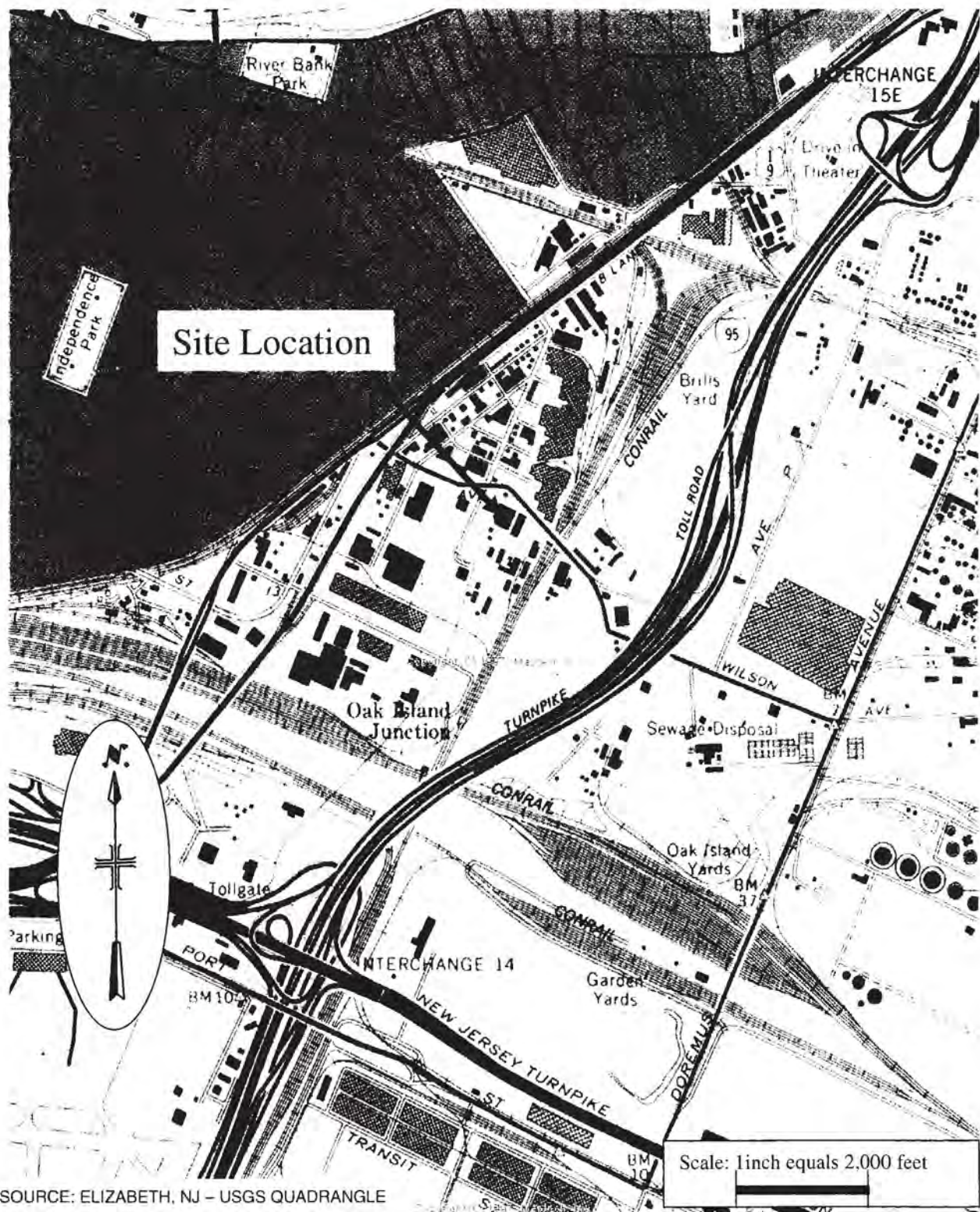
A-27

Figure 5. General Site Drainage Features



Albert Steel Drum Site
 aka Prentiss Chemical; Fed Ex
 338 Wilson Avenue
 Newark, New Jersey
 PI# G00000433

Albert Steel Drum Site -
 USGS Topographic Map
 Elizabeth Quadrangle



**MALCOLM
PIRNIE**

Albert Steel Drum Site
SITE LOCATION MAP

MALCOLM PIRNIE, INC.

FIGURE 1

Appendix A

400 Delancey
(Former USF Red Star)

ELIZABETH, N. J. — N. Y.

N4037.5—W7407.5/7.5

1967
PHOTOREVISED 1981
DMA 8185 II NW-SERIES V822

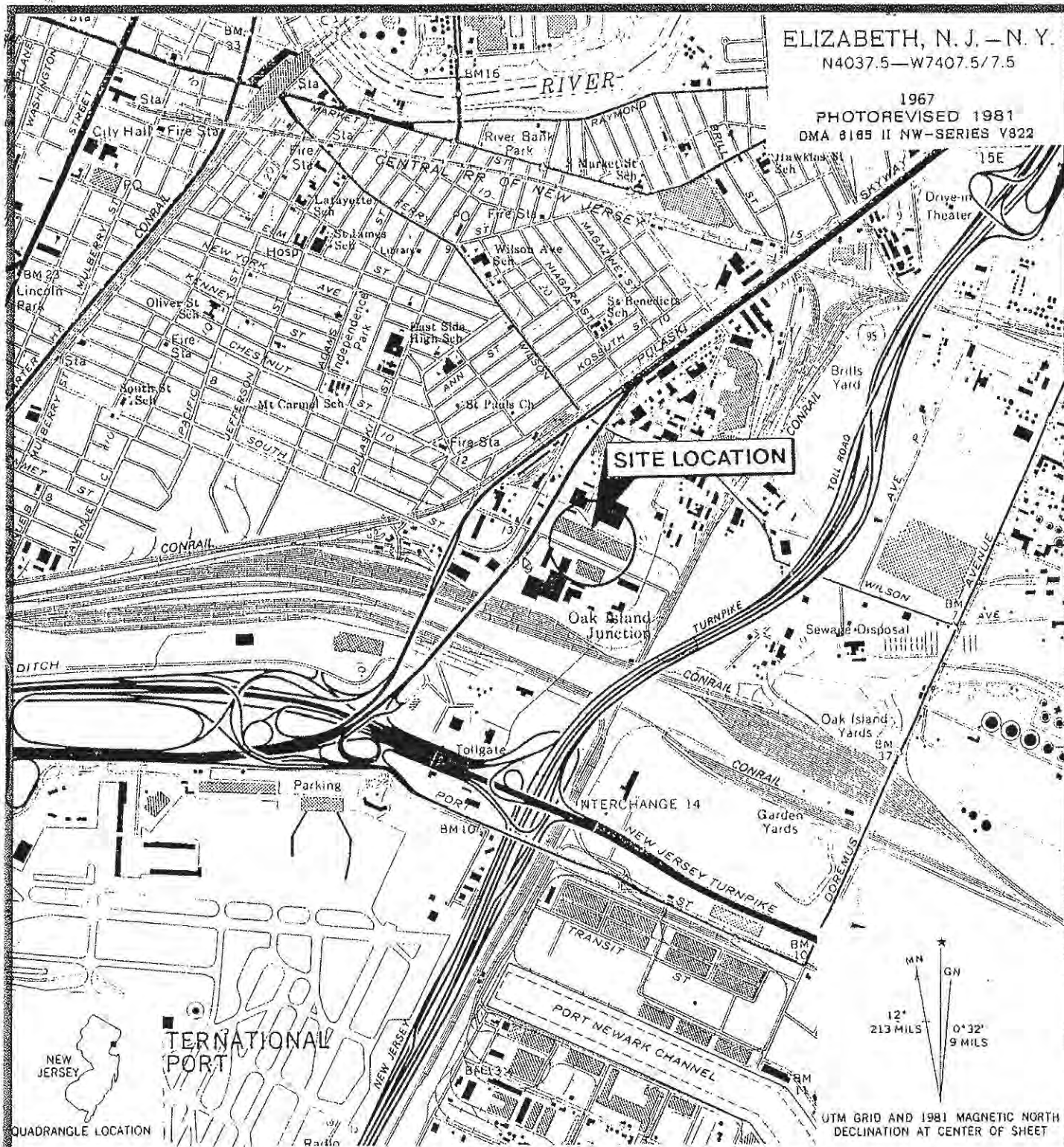


FIGURE 1.0

REGIONAL SITE LOCATION MAP

TNT/RED STAR EXPRESS, INC.
400 Delancey Street
Newark, Essex County, New Jersey



ENVIRONMENTAL, INC.

4 East Stow Road
Marlton, New Jersey 08053
609/985-8800 1-800-228-8018

SCALE
1"=2000'

DRAWN BY
USGS

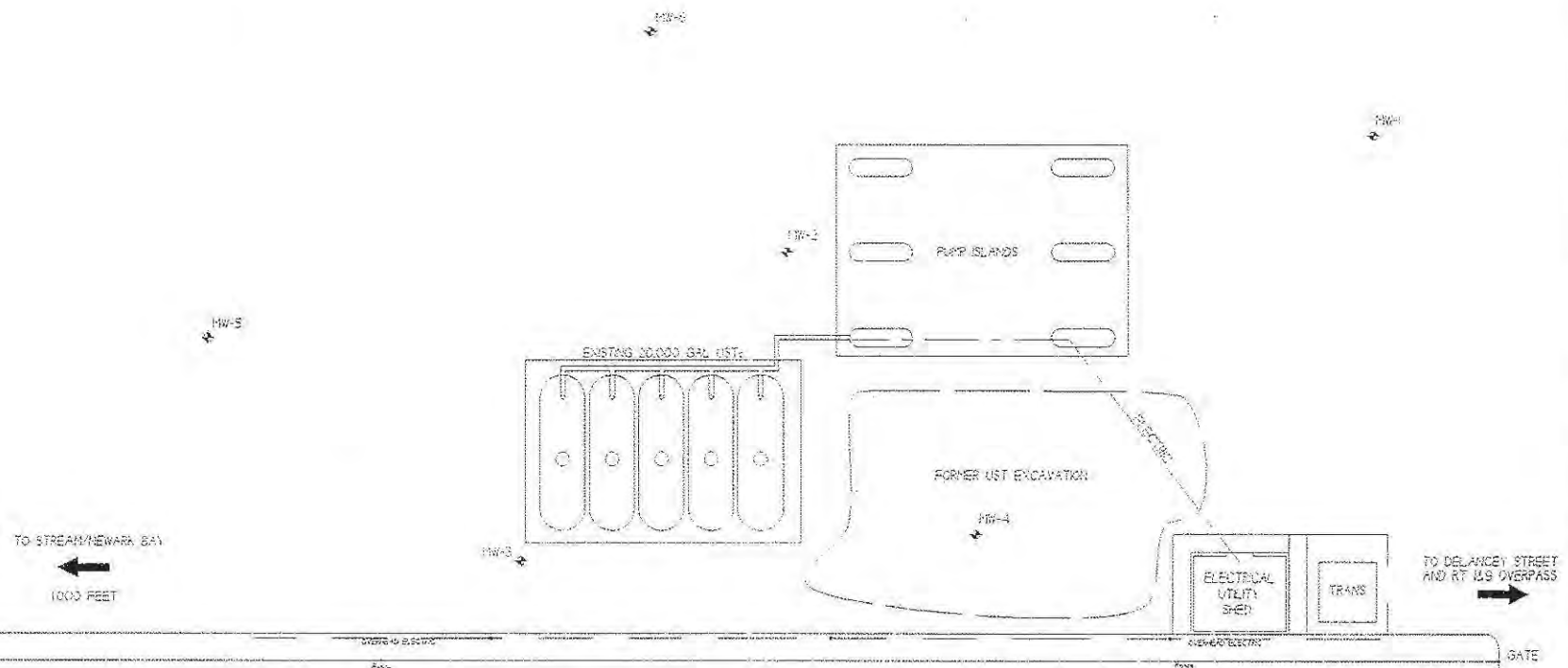
DATE
PR 1981

PROJECT
94-474

APP'D BY
SWN

DRAWING NO.
1.0

TNT/RED STAR SHIPPING & RECEIVING BUILDING



NOTES:
 PL - SPATIAL LEAD AND VOC/SVOC PLUME DELINEATION
 SH - BOREHOLES ALONG POST-EXCAVATION UST PERM DATA GAP
 MW - MONITOR WELL
 SD - POST-EXCAVATION SOIL SAMPLES

TTI ENVIRONMENTAL, INC.
 4 East Stow Road
 Milltown, New Jersey

GENERAL SITE PLAN

TNT/RED STAR EXPRESS
 400 Delancey Street
 Newark, Essex County, New Jersey

SCALE: As Shown	DATE: 6/13/86	DRAWING NO: 2.0
PROJECT: 94-474	DRAWN BY: SWN	APPROVED BY: RO

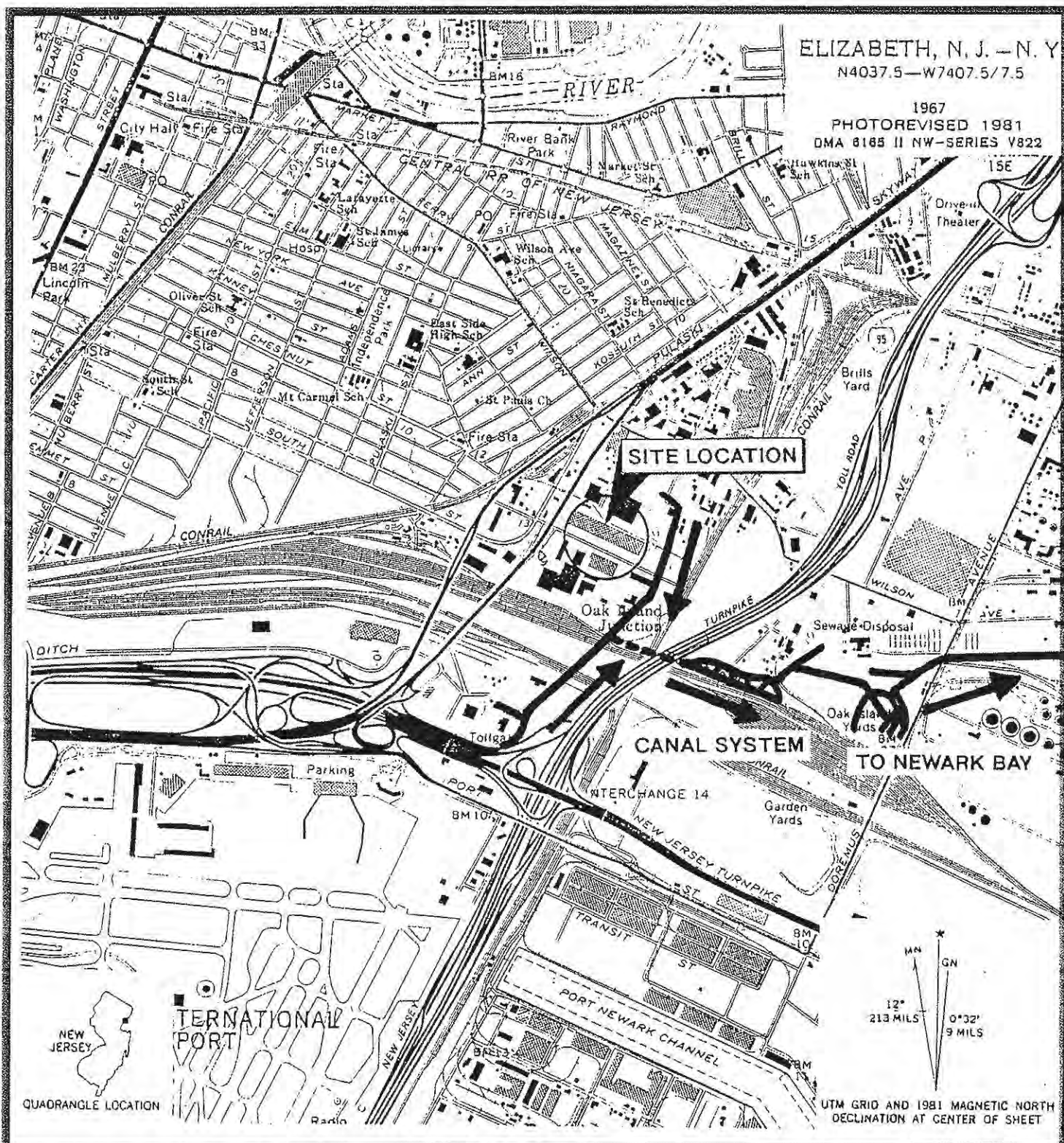


FIGURE 3.0 B

SURFACE WATER DRAINAGE PATTERNS

TNT/RED STAR EXPRESS, INC.
400 Delancey Street
Newark, Essex County, New Jersey



ENVIRONMENTAL, INC.

4 East Stow Road
Marlton, New Jersey 08053
609/985-8800 1-800-228-8018

SCALE 1"=2000'	DRAWN BY USGS	DATE 6/18/96
PROJECT 94-474	APP'D BY SWN	DRAWING NO. 3.0B

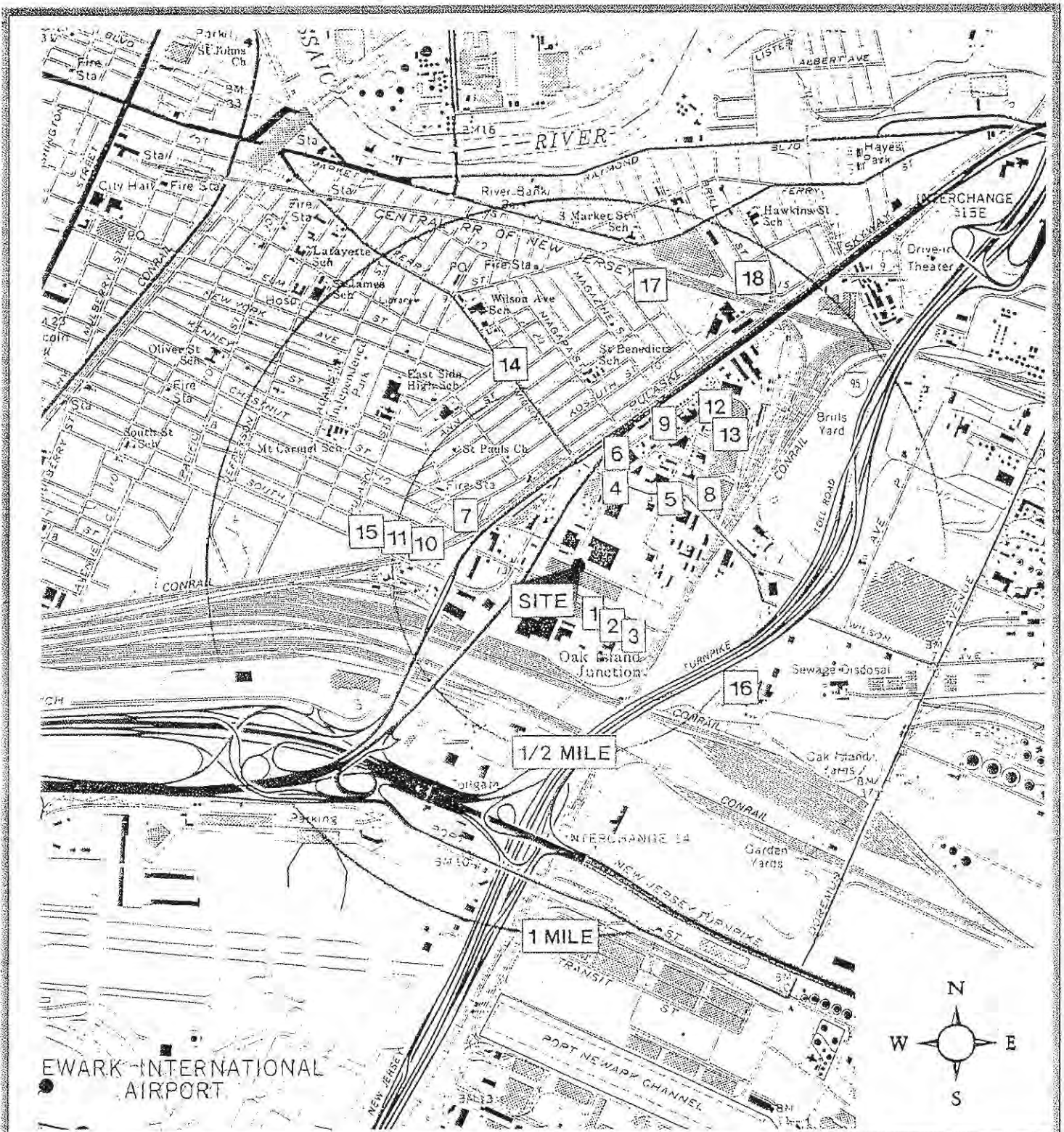


FIGURE 6.0
WELL SEARCH MAP

TNT/RED STAR EXPRESS, INC.
400 Delancey Street
Newark, Essex County, New Jersey



ENVIRONMENTAL, INC.

4 East Stow Road
Marlton, New Jersey 08053
609/985-8800 1-800-228-8018

SCALE 1" = 2000'	DRAWN BY USGS	DATE 6/18/96
PROJECT 94-474	APP'D BY SWN	DRAWING NO. 6.0

Appendix D

OSHA Poster (English and Spanish)



Job Safety and Health IT'S THE LAW!

All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a work-related injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request an OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. OSHA will keep your name confidential. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

This poster is available free from OSHA.

Contact OSHA. We can help.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Report to OSHA all work-related fatalities within 8 hours, and all inpatient hospitalizations, amputations and losses of an eye within 24 hours.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

FREE ASSISTANCE to identify and correct hazards is available to small and medium-sized employers, without citation or penalty, through OSHA-supported consultation programs in every state.





Departamento de Trabajo
de los EE. UU.



Seguridad y Salud en el Trabajo ¡ES LA LEY!

Todos los trabajadores tienen el derecho a:

- Un lugar de trabajo seguro.
- Decir algo a su empleador o la OSHA sobre preocupaciones de seguridad o salud, o reportar una lesión o enfermedad en el trabajo, sin sufrir represalias.
- Recibir información y entrenamiento sobre los peligros del trabajo, incluyendo sustancias tóxicas en su sitio de trabajo.
- Pedirle a la OSHA inspeccionar su lugar de trabajo si usted cree que hay condiciones peligrosas o insalubres. Su información es confidencial. Algún representante suyo puede comunicarse con OSHA a su nombre.
- Participar (o su representante puede participar) en la inspección de OSHA y hablar en privado con el inspector.
- Presentar una queja con la OSHA dentro de 30 días (por teléfono, por internet, o por correo) si usted ha sufrido represalias por ejercer sus derechos.
- Ver cualesquiera citaciones de la OSHA emitidas a su empleador.
- Pedir copias de sus registros médicos, pruebas que miden los peligros en el trabajo, y registros de lesiones y enfermedades relacionadas con el trabajo.

Los empleadores deben:

- Proveer a los trabajadores un lugar de trabajo libre de peligros reconocidos. Es ilegal discriminar contra un empleado quien ha ejercido sus derechos bajo la ley, incluyendo hablando sobre preocupaciones de seguridad o salud a usted o con la OSHA, o por reportar una lesión o enfermedad relacionada con el trabajo.
- Cumplir con todas las normas aplicables de la OSHA.
- Reportar a la OSHA todas las fatalidades relacionadas con el trabajo dentro de 8 horas, y todas hospitalizaciones, amputaciones y perdidos de un ojo dentro de 24 horas.
- Proporcionar el entrenamiento requerido a todos los trabajadores en un idioma y vocabulario que pueden entender.
- Mostrar claramente este cartel en el lugar de trabajo.
- Mostrar las citaciones de la OSHA acerca del lugar de la violación alegada.

Los empleadores de tamaño pequeño y mediano pueden recibir ASISTENCIA GRATIS para identificar y corregir los peligros sin citación o multa, a través de los programas de consultación apoyados por la OSHA en cada estado.

Este cartel está disponible de la OSHA para gratis.

Llame OSHA. Podemos ayudar.



Appendix E

Injury and Illness Report Form



Injury/Illness Report Form

Effective: 1/3/2012 / Revision: 01

Information about Injured, Sick, or Involved Employee

First Name:		MI:		Last Name:	
Employee Number:		Unit:	Click to Select	Office:	
Phone Number:			Group Leader or Direct Manager		
Address:					
Employer:	<input type="checkbox"/> CDM Smith <input type="checkbox"/> Subcontractor	Employee Status:	<input type="checkbox"/> Full Time <input type="checkbox"/> Part Time		
Name of Subcontractor Firm:				Subcontractor Phone No.	
Subcontractor Address:					

Information about Accident/Injury/Illness

Date of Accident:		Time of Accident:		Vehicle Involved?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Injury or Illness:	<input type="checkbox"/> Injury <input type="checkbox"/> Illness	Property Damage?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Client Service Group:	Click to Select
Project and Location of Accident: (Project Name, City and State)					
Project Manager:		Witness(es):	Attach witness statement if available		

(Attach additional information if needed, i.e. pictures, diagrams, etc.)

Description of Accident:(Explain what happened).

Description of Injury(Identify body part and substance or object that caused harm)

Immediate Actions Taken or Required:



Injury/Illness Report Form

Effective: 1/3/2012 / Revision: 01

Did the injured employee receive medical treatment?*

☐ Yes
☐ No

Did the employee return to work?

☐ Yes
☐ No

***Note: If the employee receives medical treatment from an offsite medical facility they must get a "work status report" from the Doctor or Medical Professional that provides treatment.**

Name of Clinic/Medical Facility

Name of Doctor:

Clinic/Medical Facility Address:

Phone No.:

Current Status of Employee:**Signatures:**

Employee

X

Date:

/ /

Type or Print Name:

Group Leader or Direct Manager:

X

Date:

/ /

Type or Print Name:

H&S Manager:

X

Date:

/ /

Type or Print Name:

For Office Use Only:

Case No.:

OSHA Recordable? ☐ Yes ☐ No

Project No.:

Accident or Diagnosis Date:

Injury/Illness Severity, based on initial evaluation:

OSHA Illness Code:

- ☐ First Aid Only
☐ Medical Treatment
☐ Lost Workdays – Restricted Activity
☐ Lost Workdays – Away from Work
☐ Fatality Date: _____
☐ Total Number of Lost Days: _____

- ☐ Occupational Skin Diseases or Disorders
☐ Dust Diseases of the Lungs
☐ Respiratory Conditions Due to Toxic Agents
☐ Poisoning
☐ Disorders Due to Physical Agents
☐ Disorders Associated with Repeated Trauma
☐ All Other Occupational Illnesses

Additional Comments: _____